CURRICULUM

INDUS MEDICAL COLLEGE TANDO MUHAMMAD KHAN

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Referral Documents:

IMC Curriculum Booklet 2019
Pakistan Medical and Dental Council (PM&DC) Guidelines 2019
Medical Colleges Standards Accreditation & Proforma 2019-21
Liaquat University of Medical and Health Sciences Jamshoro Vision and Institutional Mission.
Liaquat University of Medical and Health Sciences Jamshoro Syllabus Books

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CONTENT

S. No	Title	Page No.
1.	**Mission Statement**	03
2.	**Institutional Autonomy and Academic Freedom**	03
3.	**Process of Curriculum Design at IMC**	04
4.	**Principles of IMC Curriculum**	04
5.	**Objectives**	05
6.	**Curriculum Outline**	14
7.	**Educational Content/ Syllabus**	16
8.	**Curricular Organization and teaching hours**	17
9.	**Instructional Methods**	45
10.	**Curricular Management**	48
11.	**Outcomes and competencies**	48
12.	**Assessment**	56
13.	**Student**	64
14.	**Faculty**	72
15.	**Program Evaluation and Continuous Renewal**	73
16.	**Governance, Services and Resources**	74
17.	**Research and Scholarship**	75

1. Mission Statement

The prime objective of Indus Medical College is to provide Quality Medical Education and care for ailing humanity through the Quality Health Delivery System. To prepare the Medical Graduates in the field of Medicine as the most competent learned doctors, able to serve the population in general, poor and downtrodden in particular. Be also compatible at national & international levels to take up the challenges of community and accept the sole responsibility with strong desire and remain focused to achieve academic excellence, strongly believe in themselves and in the very basic principle of Medicine as the "Most Noble Profession" and maintain the professional honor and dignity throughout their life and uphold the principles of medical ethics.

2. Institutional Autonomy and Academic Freedom

Organogram

Indus Medical College Tando Muhammad Khan is affiliated with Liaquat University of Medical and Health Sciences Jamshoro. However its accreditation is evaluated and monitored by Pakistan Medical & Dental Council (PM&DC) independently. Multiple evaluations have been done by erstwhile PM&DC and college is recognized for 100 MBBS students.

Indus Medical College is established by a private organization Professional Associates Pvt ltd. which is registered with Security Exchange Commission of Pakistan.“

College is run by Academic Council and Curriculum Committee. Institution is headed by CEO and Principal. (Organogram of Institution, names and qualification of members of Academic Council and Curricular Committee are attached herewith). Remaining within the guidelines of PM&DC and following largely the syllabus set by LUMHS Jamshoro, IMC, TMK is fully capable to formulate and implement curricular policies to produce its graduates to have desired outcomes as per our mission and vision. The Principal, Academic Council and Curricular committee meet regularly before, during and after completion of each academic session to revisit and ensure smooth implementation of curriculum. From admission process, teaching and learning process, revisiting curriculum to assessment every aspect is minutely and frequently discussed to ensure policies implementation and achieve desired outcomes.

IMC, TMK has functional Administration and Finance Managers to provide monetary and physical resources needed for teaching and learning and to meet the needs of Faculty and Students for smooth execution of curriculum implementation.

PM&DC guided curriculum is implemented in letter and spirit. Emphasis is given to horizontal and vertical integration, evidence based medical education practices, innovative teaching strategies within the framework of PM&DC and increased role of active learning

3. Process of Curriculum Design and Organization at IMC TM Khan

Indus Medical College Tando Muhammad Khan is following general guidelines of PM&DC in letter and spirit since its inception. It has an academic council and curricular committee which translate guidelines into action and implementation. Academic council and curriculum committee meet from time to time to monitor all aspects of curriculum implementation from admission process, syllabus& teaching calendars, and faculty and students requirements to assessment process. It ensures that objectives and outcome set in curriculum are achieved.

Curriculum designing follows the six step model of kern of curriculum development for medical education.

Curriculum designing and mapping process starts by assessing the needs of community. Keeping this in mind multiple workshops were conducted in faculty development program at IMC to understand and implement need based curriculum. Faculties identified various gaps in existing curriculum by disease pattern in community, published data and short comings in general medical practice.

Organogram and TORs of curriculum committee are attached with the curricular document.

4. Principles of IMC Curriculum

IMC curriculum committee follows the principle to develop and implement a curriculum which is outcome-based, patient-centered, student centered, community-relevant and promotes health and prevent disease.

It aims to implement a curriculum which incorporates active learning as a major educational strategy. It develops and implements a curriculum according to resources stipulated by accrediting agency (PM&DC). IMC curriculum has followed the standards laid down for the self assessment process of an educational program by PM&DC and Higher Education Commission (HEC) Pakistan.

The curriculum aims at acquiring & application of knowledge and problem solving rather than only recall of factual knowledge and to define the psychomotor and effective skills that the students should be able to perform themselves and differentiate them from those that should be observed.

Curriculum focuses on the principles and concepts of medicine and effort has been taken to incorporate areas which students must know and avoid the repetition and lengthy available knowledge transfer which students can easily access.

Early Clinical Exposure

Curricular committee endeavors to implement a curriculum that has early exposure to patients, encourage students to link concepts of Basic and Clinical disciplines.

Curriculum specially emphasizes knowledge, skills and attitudes required by a general practitioner.

Curriculum ensure that Clinical sciences get at least half of the time of the undergraduate program and ensure systemic and organized learning in clinical setting.

Special emphasis has been given to the fact that credit hours allocation should be done in a way that Clinical disciplines and training should have more than 50% of time allocation with maximum possible time to practical learning and implementation. Learning practical patient care skills is given priority.

Prime Objective of Curriculum

The prime objective of Indus Medical College is to provide quality medical education and caring for the ailing humanity through quality Health Delivery System. Students should be well versed in different national health program with special emphasis on disease prevention and health promotion.

Curriculum aims to prepare the medical graduate (in the field of Medicine) as the most competent learned doctor able to serve the population in general and poor and downtrodden in particular. Graduates should have strong belief in themselves and in very basic principles of Medicine as the most noble profession and maintain professional honor and dignity throughout the life and uphold the principles of medical ethics. Hence teaching and assessing ethics and behavior has been made the part of curriculum. Learning to be an effective communicator, demonstrating empathy with patients and developing a professional trust building doctor –patient relationship.

It responds to the evidence based local, national and global needs. Graduates should be compatible at National and International level to take up the challenges in community and accept the sole responsibility with strong desire and remain focused to achieve academic excellence.

5. Objectives & Goals of Curriculum

Curriculum follows the guidelines of PM&DC to prepare a 7 Star Graduate who should have knowledge, skills and attitude of a competent medical graduate. As per PM&DC recommendation a 7 star competent Medical Graduate should have outcome competencies of:

OBJECTIVES OF MBBS PROGRAM:

S.NO	OBJECTIVE	SKILL
1	Clinical, Cognitive and Patient Care Skills	(Skillful)
2	Scientific Knowledge for Good Medical Practice	(Knowledgeable)
3	Knowledge of Population Health and Health Systems	(Community Health Promoter)
4	Critical Thinking, Problem Solving and Reflective Practice	(Problem-solver)
5	Competencies related to Professional Attributes	(Behavioral Sciences and Professionalism)
6	Competencies to Research	(Scholar/ Researcher)
7	Competencies to Lead and Manage	Leader and Role Model

Details of the major competencies as per PM&DC guidelines are as under:

1. Skillful (Clinical, Cognitive and Patient Care Skills)

Competent medical graduates require sound clinical skills grounded in knowledge and skills in patient-centered care. They should be able to demonstrate that they can:

a. Take A Focused History and identify the patient's risk factors with appreciation of the bio-psycho-social model taking into consideration the environment, ethnicity, race, religion, gender, age, sexual orientation, occupation and cultural practices.

b. **Perform Physical** and psychological examinations in order to identify specific problems and differentiate those from others and non-conformity to anatomical or physiological configurations.

c. Formulate a provisional diagnosis with justification, and two to three most likely differential diagnoses.

d. Order appropriate investigations and interpret their reports to either confirm the diagnosis or differentiate from others.

e. Perform various common procedures ensuring infection control like giving injections (I/M, I/V, S/C, I/D), managing infusion lines and blood transfusion, providing first aid, basic life support (including cardiopulmonary resuscitation), nebulization, wound care and dressings, oxygen therapy, taking swabs and smears, recording ECG, performing peak flow spirometry, blood sugar testing by glucometer, proctoscopy, urinary catheterization, urinalysis, and simple skin suturing. Students should be able to learn and perform these skills in a simulation-based environment (Skills lab), followed by performance on patients.

f. Debate the advantages, disadvantages, indications, contraindications, Limitations and complications of the current treatment modalities, justifying the use of each by best available evidence.

g. Formulate management plans in partnership with patients ensuring their safety by: Diagnosing and managing common health problems independently Using cost-effective best evidence patient-safe approaches, reporting adverse drug reactions and drug interactions Recognizing alternate medicine as an option with its effect on health Incorporating patients' concerns, expectations & understanding, determining the extent to which the patients wish to be involved in decision-making, and respecting the decisions and rights of the patients Recognizing, stabilizing (first aid and basic life support), investigating and managing the patient as necessary (Transport, Triage, Neglect, Abuse) Being readily accessible when on duty. Alleviating pain and distress, including end-of-life care . Recognizing and working within the limits of own competence, making use of available resources, and taking advice from colleagues where appropriate, following the consultation process.

h. Advise and counsel the patient and their family members for appropriate health promotion, rehabilitation and support, prevention of risk factors for family members including genetic counseling, immediate treatment and medications, complication and prognosis, using simple terms and lay man language.

i. Educate the patient regarding the health problem, available choices, management plan, self-care, and use of prescribed drugs and equipment, such as inhalers.

j. Recognize and take into consideration issues of equality, equity and diversity, and that opportunities are missed if not perceived to be useful by others.

k. Describe and debate the reasons for the success or failures of various approaches to increase prevention and to decrease social inequities.

l. Manage time and prioritize tasks and use of resources Ensure patient safety always including strict infection control practices.

2. Knowledgeable (Scientific Knowledge for Good Medical Practice)

This embodies knowledge of basic medical and clinical sciences required for the practice of medicine. A medical/dental graduate should be able to:-

a. Differentiate between: normal and abnormal structure and functions of the body, in order to recognize and identify abnormalities in body structure in context of different

diseases normal and abnormal molecular, cellular, biochemical, and physiological and pathophysiological mechanisms and processes (physical and mental) that maintain and derange the homeostasis, in health and disease. normal and abnormal human behavior, and relate the abnormality to its psycho-pathological and pathophysiological basis. effects of growth, development and aging upon the individual, family and community in the human life cycle. biological and social determinants and risk factors of disease, various etiological cause (s) and causative agents for specific injuries, illnesses and diseases. available therapeutic options to select the most appropriate treatment modality or drug (s) for common diseases based on pharma co-dynamics and/or efficacy. other relevant Biochemical, Pharmacological, Surgical, Psychological, social interventions in acute and chronic illness, rehabilitation and end-of-life care and recognizing the role of religious and cultural interventions in such situations.

b. Relate: the effects and interactions of physical, emotional and social environments to health and disease of humans, the natural history of acute and chronic, communicable and non communicable diseases with respective etiologic agents and effect of appropriate interventions on the progress of disease.

c. Apply: evidence-based medicine concepts to provide best possible cost-effective care.
d. Ensure: compliance with the legal system as it impacts health care and the PM&DC regulations. patient safety guidelines.

3. Community Heath Promoter (Knowledge of Population Health and Healthcare Systems)

To deal with problems of population-based primary health care, including health promotion and disease prevention with special emphasis on vulnerable populations, medical/dental graduates require knowledge of population health and healthcare systems. The graduates should understand their role and be able to take appropriate action for protecting and promoting health of populations. They should be able to:

a. Understand their role and be able to take appropriate action for protecting and promoting the health of community.

b. Relate effects of life-styles, genetic, demographic, environmental, social, cultural, economic and psychological determinants of health and their impact on community.

c. Take appropriate action for infectious, non-communicable disease and injury prevention, and in protecting, maintaining and promoting the health of individuals, families and community.

d. Evaluate national and global trends in morbidity and mortality of diseases and injuries of social significance, the impact of migration and environmental factors on health and the role of national and international health organizations on health status.

e. Work as an effective member of the healthcare team and demonstrate acceptance of the roles and responsibilities of other health and health related personnel in providing health care to individuals, populations and communities.

f. Adopt a multidisciplinary approach for health promoting interventions which require shared responsibility and partnerships of the health care professions with the population served as well as inter-sectoral collaboration.

g. Apply the basics of health systems including policies, organizations, financing, cost-containment measures of rising healthcare costs, and principles of effective management to the care of populations, families and individuals.

h. Promote and implement mechanisms that support equity in access to healthcare and its quality.

i. Make decisions for healthcare using demography, biostatistics and epidemiology as well as national, regional and local surveillance data.

4. Critical Thinker (Problem Solving and Reflective Practice)

The ability to critically evaluate existing knowledge, technology and information, and to be able to reflect on it, is necessary for solving problems. Medical and dental graduates should be able to demonstrate:

a. Use of information obtained and correlated from different sources;

b. Critical data evaluation (interpret, analyze, synthesize, evaluate to form decisions)

c. Dealing effectively with complexity, uncertainty and probability in medical decision-making, reflecting on the latest evidence and its application to the health issues.

d. Regular reflection on their own practice and on standards of medical practice.

e. Initiating, participating in or adapting to change as required, to ensure that the profession and the patients, both benefit;

f. Flexibility and a problem-solving approach

g. Commitment to quality assurance and monitoring by participating in chart audits and reporting critical incidents to improve medical practice and decrease risk to self, patients and the public.

h. Raising concerns about public risk and patient safety.

5. Professional (Behavior and Professionalism)

Competent medical graduates require professional values, attitudes and behaviors that embody good medical practice i.e., life-long learning, altruism, empathy, cultural and religious sensitivity, honesty, accountability, probity, ethics, communication skills, and working in teams. The medical/dental graduates should be cognizant with the PM&DC Competencies. Graduates should role model their code of conduct, professionalism and values, on and off duty, throughout their lives, and thus lead by example, in order to justify the trust reposed in them by the public. Their behavior must enhance public trust in the profession.

i. Lifelong self-directed learner

Medical graduates must continually acquire new scientific knowledge and skills to maintain competence, and incorporate it into their day-to-day medical practice. For life-long learning, they should demonstrate a desire for continuing medical/dental education during professional life through personal development activities to continuously acquire and use new knowledge and technologies.

Medical graduates should be able to:

a. Demonstrate continuous learning based on regular self-assessment seeking peer feed-back. This also includes a continuous undertaking of self-directed study and credited, continuous medical education activities up to re-licensure and recertification.

b. Manage information effectively in order to use it for efficient and effective self learning, medical problem solving and decision-making: accurately document and maintain records of their own practice for better patient care and for analysis and improvement. retrieve patient-specific information from a clinical data system. using information and communication technology based on its value and limitations. o search, collect, organize and interpret health and biomedical information from credible databases and sources. match patient information to evidence available in literature to form judgments for diagnostic, therapeutic, preventive or prognostic decisions and for surveillance and monitoring of health status.

c. Provide evidence of continuing career advancement by pursuing further training in specific fields or continuing professional development by attending CPD programs in their primary discipline or as a professional. This evidence may be collated by maintaining professional development portfolios.

d. Function effectively as a mentor and a teacher with training, in order to appraise, assess, teach, and provide feedback to themselves, peers, colleagues and students.

e. Respond positively to appraisals and feedback.

ii. Altruistic and Empathetic

Medical graduates should be able to demonstrate professional values of empathy, altruism and cultural sensitivity in arranging or coordinating the best possible care:

a. Appropriate demeanor and dress code.

b. Responsibility, compassion, empathy, honesty, and integrity.

c. Tolerance for diversity.

d. Caring attitude towards patients and health problems.

e. Put patients first and the patient's needs before their own.

f. Have patient safety as of paramount priority.

g. Culture-sensitive practice which is also sensitive to patient's religious beliefs.

h. Special sensitivity towards vulnerable populations.

iii. Ethical Medical graduates should be able to demonstrate professional values of self and professional accountability, honesty, probity, and ethics.

a. Without discrimination on the basis of age, gender, religion or beliefs, color, race, ethnic or national origin, culture, disability, disease, lifestyle, marital or parental status, sexual orientation and social or economic status.
b. Strive for constant improvement of self & health delivery systems;
c. Respect the views & interests of the patient and patient's family;
d. Uphold principles of patient autonomy, beneficence, nonmaleficence, justice, confidentiality and informed consent.
e. Use moral reasoning in decision-making while dealing with conflicts amongst ethical, legal and professional issues including those raised by economic constraints, commercialization of healthcare, and scientific advances.
f. Being accountable for regulation of self and the profession, through audits and performance reviews, in setting up one's own practice and in dealing with pharmaceutical and other commercial enterprises.

iv. Collaborator

The medical graduate should be able to demonstrate skills of teamwork to best serve the interests of the patient, profession and institution by

a. Working as an effective team member, understanding the importance of each role.

b. Demonstrating collegiality and respect for juniors, peers, seniors and the healthcare team

c. Continuously assessing themselves and others in their roles, and acting accordingly.

d. Sharing information and handing over care appropriately.

e. Focusing on a collegial but problem-solving approach.

v. Communicator

The medical graduates should be able to demonstrate:

a. Non-Verbal Communication Skills, including active listening, empathy and a caring attitude; and demonstrating considerate and sensitive manners while dealing with patients and their families, nurses, other health professionals, community, the general public and the media.

b. Verbal Communication Skills, clearly expressing themselves in layman's language; counseling patients sensitively and effectively, providing information in a manner which ensures that patients and families have understood the full information, so that they make educated decisions when consenting to any procedure or therapy; clear, effective and sensitive communication for breaking bad news, dealing with an angry or violent patients, difficult circumstances and vulnerable patients; presentation skills.

c. Written and Electronic Communication Skills, with well-organized, legible, accurate, complete and concise documentation of prescriptions, medical records, procedural and progress notes, discharge summaries and referral letters including all important information and fulfilling medico legal requirements.

d. Confidentiality, and balance confidentiality with public risk.

e. Dissemination of information & research findings to improve health care.

vi . Scholar & Researcher

The medical graduates are expected to demonstrate constructive criticism, a spirit of enquiry, creativity and a research-oriented attitude. They graduates should be able to:

a. Identify a researchable problem and critically review literature

b. Phrase succinct research questions and formulate hypotheses

c. Identify the appropriate research design(s) in Epidemiology and analytical tests in Biostatistics to answer the research question.

d. Collect, analyze and evaluate data, and present results.

e. Demonstrate ethics in conducting research and in ownership of intellectual property.

vii. Leader and Role Model:

The medical graduates are expected to demonstrate exemplary conduct and leadership potential in:

a. Advancing healthcare.
b. Enhancing medical education;
c. Initiating, participating in and adapting to change, using scientific evidence and approaches.
d. Enhancing the trust of public in the medical and dental profession by being exceptional role models at work and also when away.
e. Accept leadership if required.
f. Provide leadership in issues concerning society

Methodology for producing seven star doctors

Integrated modular curriculum has already been started at IMC. At insure transfer of basic medical science knowledge and outcome.

Modules have been designed to start from 1st and 2nd year based on clinical theme/scenarios.

Clearly defined learning outcome of competencies have been designed.

Curricular hours have been distributed to basic & clinical sciences as per further importance.

Elective rotation programs are being offered and students guided for their rotation.

Joint teaching session like CPC and paired lecture system are being conducted and place in time table.

Instmetinal tools are so designed to make the curriculum student centered and encourage the students to become a self directed learning.

To achieve these objectives curriculum ensures that students teaching content, strategies and assessment.

Cognitive Domain:

C1 Recognition and Recall

C2 Interpretation and application

C3 Problem-solving (analysis, synthesis and judgment)

Psychomotor Domain:

P1 Observe

P2 Assist in the procedure

P3 Perform under supervision

P4 Perform independently

Affective Domain **(Attitudes, Values, Behaviors)**

6. Curriculum Outline

IMC curriculum is based on hybrid system in first four year curriculum contains integrated modules and in final year curriculum is based on subjects.

1. Traditional curriculum

The traditional discipline-based curriculum is still being used in some medical schools across the globe, including Pakistan. Students are not exposed to clinical education or patients till the third year of their medical program. During the first two years of their medical education, the curriculum is completely focused on basic sciences. The first 2 years are frequently taught in a didactic, discipline-based format.

Discipline based curriculum being the oldest form of teaching where no effort is made to teach the basic sciences in the clinical context.

3. Integrated Curriculum

It is defined as combining and coordinating the different contents to form a single curriculum new whole. Horizontal Integration refers to the provision of learning within the structure where individual departments/subject areas contribute to the development and delivery of learning in a meaningful, holistic manner, organized in blocks or units corresponding to body systems.

In Vertical Integration information during the various curricular phase is taught together focused on key concepts or themes which run throughout all years with revisiting of knowledge. There is early introduction to clinical skills and their development alongside basic sciences.

3. Hybrid Curriculum

It combines didactic courses with clinical rotations to equip students with the necessary skills to become a good and competent doctor. It encompasses both traditional style of teaching and some element of integration. It appears to be more feasible for developing countries.

Scheme of Learning

Anatomy, Physiology, Biochemistry, Pathology, Pharmacology, Community Medicine Forensic Medicine & Toxicology, Ophthalmology, Otolaryngology, Paediatrics, Obstetrics and Gynecology, Medicine and Surgery along with allied disciplines are part of Curriculum as major subjects for teaching and assessment. Areas like Behavioral Sciences, Ethics, Communication Skills, Patient Safety & Infection Control, Professionalism, Research, Clinical Methods, and evidence based Medicine, English language, Islamiyat/ Religious Studies, Pakistan Studies have been interspersed with major disciplines where appropriate. Preventive medicine, reproductive health and health promotion are incorporated in the educational content to be taught. Topics like study skills, resource identification, data searching, leadership, and principles of management are made part of the content.

Health Promotion, Disease Prevention and Rehabilitation Care:

Curriculum is balanced to provide space for Health promotion, disease prevention, curative and rehabilitative care.

Special emphasis has been given to allocation of time not only to the diagnosis and treatment of the ailment but also on the health promotion like role of diet and nutrition, extracurricular activities like sports , culture , debates and communication to highlight the importance of physical and mental health promotion. Basic preventive measures like hand washing, breast feeding, nutrition, immunization and safe drinking water have been emphasized in the curriculum and integrated where ever relevant to focus on prevention and health promotion rather than only disease and its treatment. Rehabilitation has been focused by establishing facilities for physiotherapy. Artificial limb transplant services by orthopedic department is a distinguished feature of the affiliated IMC hospital. Similarly prevention and treatment of blindness services by free eye surgery camps have treated hundreds of patients. Students work as volunteers to learn the importance of rehabilitation during these services.

All efforts have been made to design the curriculum which is outcome based. and objectives meet the outcomes.

Teaching Methodologies are applied on the concepts of problem based learning to integrate concepts of basic sciences with clinical sciences. After first two years structural changes in human body due to disease (Pathology) and treatment required (Pharmacology) are taught. Working in community for disease prevention (Community Medicine), role of medicine in legal matters (Forensic Medicine), Diseases of eye (Ophthalmology) and Ear, Nose and Throat (ENT) are taught in third and fourth years. Clinical disciplines teaching in Medicine, Surgery, Reproductive health (Gynae and Obstetrics) and Child health (Paediatrics) are started from third and fourth years and assessed in final years. Rotations are made in clinical disciplines to make the teaching systemic and organized. CPC are held to encourage inter disciplinary learning involving students.

Though curriculum is traditional and subject based every effort is made to make different areas to be integrated in teaching calendar. Emphasis is given on active learning strategies, interactive lectures, small group discussions, tutorials, assignment, scenario based learning, and other evidence based learning and teaching strategies like team based learning

Learning Methods

All evidence based modern methods of learning have been incorporated in teaching strategies along with the traditional modes of transfer of knowledge. Lectures, Practical's, Demonstrations, Seminar and Symposia, Clinical Pathological Conferences will be conducted. Until integrated modular Curriculum is fully implemented a new concept of basic clinical conferences has been designed and put into practice. More emphasis is given to small group teaching. Modern methods of learning like Team

Based Learning, Problem Based learning, role plays, simulation and practical skill learning in Skill Labs have been given maximum possible space. Methods to encourage active learning have been incorporated.

Clinical learning has been organized in a systemic manner with integration of relevant disciplines.

Curriculum is designed in such a way that outcome competencies are assessed both during formative teaching and summative assessment.

7. Educational Contents/ Syllabus

Indus Medical College Tando Muhammad Khan decides incorporation of educational content as per PM&DC recommendation and assessment requirement by **Liaquat University of Medical and Health Sciences Jamshoro**. A pre and post educational session meeting of academic council and curricular committee reviews the contents, discusses with relevant faculty and stake holders and finalizes the educational program, teaching calendar and learning strategies. Subject specialists of all disciplines take active part to review educational content for next session. Department of medical education plays the key role in curricular committee.

Outcome Driven Content

Curricular committee ensures that educational content and its delivery are directed towards the goals of achieving the outcomes and competencies as agreed upon in the curriculum document. Focus and emphasis is given to common problems in all disciplines to learn the skills needed for a successful general medical practitioner. Curriculum ensures that applied basic sciences are relevant to general medical practice. A curricular map is prepared and printed as syllabus book before the start of session for all years of education to be distributed to students and faculty. Syllabus books for all years are published which contain course content, faculty responsible for each topic and time tables.

Clinical Rotations

Rotation in clinical disciplines ensures that students are in supervised and planned contact with patients in indoor and outdoor setup. Field visits in community settings are organized to make students understand social and community factors relevant to health and disease.

Details of subjects, topics taught along with teachers names and time table are given for each year in two sessions. Syllabus book/ study guides are attached along with the curriculum document.

Elective Rotations

IMC has signed MOU'S with LUMHS Jamshoro, Institute of Ophthalmology Hyderabad, Sir Cowasji Institute of Psychiatry Hyderabad and NICVD Tando Muhammad Khan for elective rotations for students. Students are given choices of rotation in Fourth year and Final year MBBS to electively rotate in ICU LUMHS, Ophthalmology, Psychiatry and Cardiology in these Institutes and Hospitals. Students are allowed elective rotations of their choice during vacations on their request.

8. Curricular Organization

Indus Medical College Tando Muhammad Khan has a curriculum which is aligned with the vision statement of Liaquat University of Medical and health sciences with which it is affiliated. Its curriculum has been designed in liaison with the mission statement of the institution. Curriculum has been designed to cater for the needs of local community and prepare doctors who can serve all over Pakistan. It follows evidence based medical practices to prepare competent doctors who will be ready to accept the challenges globally as well.

Curricular Map

Indus Medical College Tando Muhammad Khan guided by academic council and curricular committee largely follows the subject based traditional MBBS curriculum prepared by PM&DC and HEC.

In initial two years major focus and credit hours are allocated to understand the structure and function of human body, systems (Anatomy and Physiology) and its structure and functioning at cellular level (Histology and Biochemistry). Applied aspects of these subjects are part of curriculum to link Basic sciences with Clinical sciences. In these two years ethics, behavioral, professionalism, communication, demographic and social aspects of medicine are also given due share. From current batch of 2021 however integrated modular system has been introduced and will continue with this batch until traditional curriculum has been fully replaced by modular integrated curriculum over a period of next four years.

This is followed by teaching and assessment of Pharmacology, General Pathology, Microbiology, Forensic Medicine & Toxicology in third year. In fourth year Special Pathology, Community Medicine, Ophthalmology and Otolaryngology are main subjects of teaching & assessment. In final year four major clinical disciplines of Medicine & Allied, Surgery & Allied, Paediatrics and Obstetrics & Gynaecology are taught and assessed. Formative assessment with feedback is part of the institutional teaching plan with MCQs, BCQs, OSPE and Application test in Team Based Learning. Summative Assessment is based on internal assessment at institutional level and final exit assessment at University level (LUMHS Jamshoro). Credit hours for teaching are distributed as per PM&DC guidelines. Details of syllabus of major subjects are as per

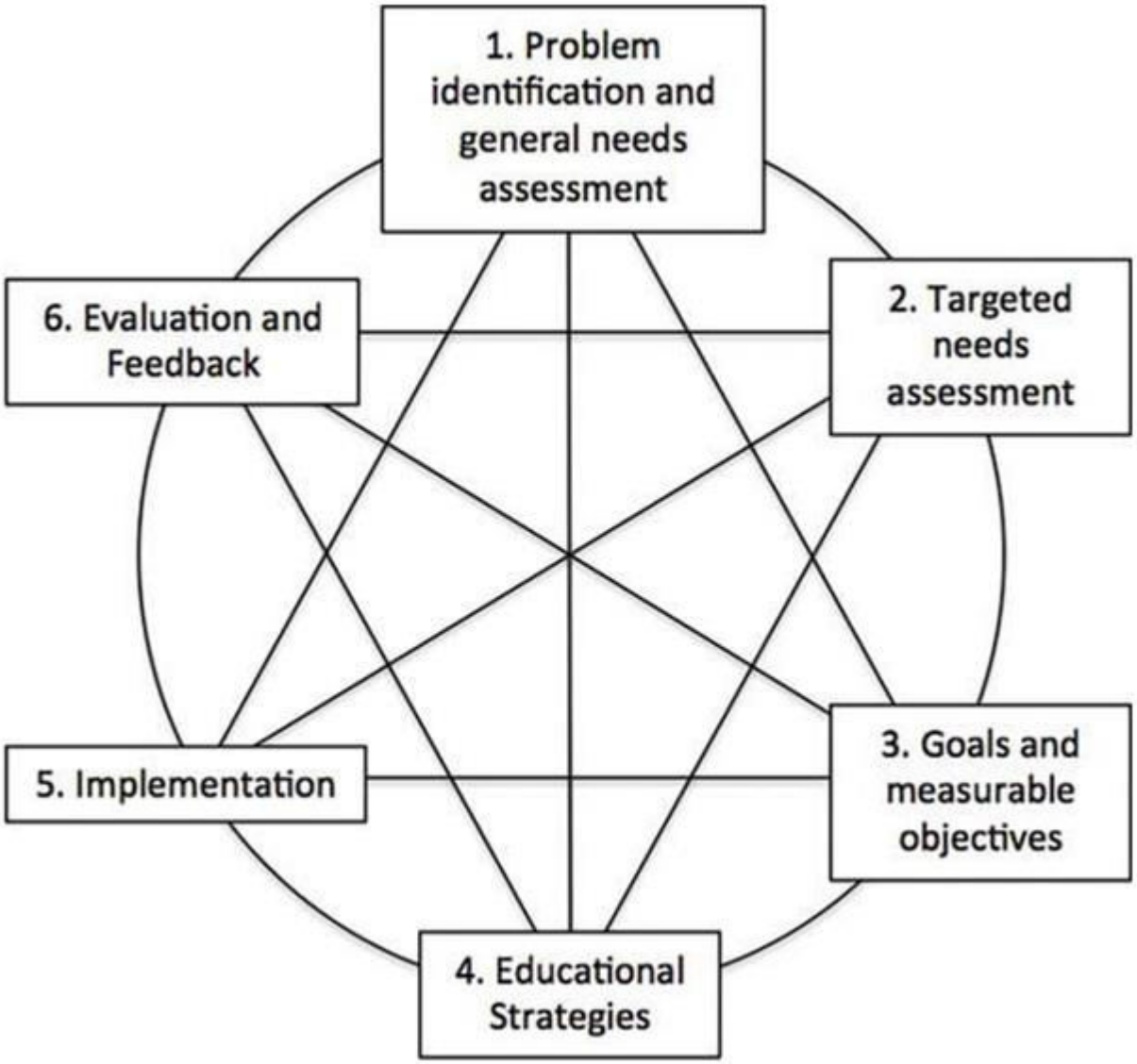
adaptation from PM&DC recommendation guidelines on curriculum (published 2024 pages 35-124).

Community Health Care

This curriculum is designed to produce doctors who can manage common health problems in community and assist in managing serious health problem at tertiary level. These doctors should be competent enough to provide adequate care to patients with empathy, deal with patients as respectable humans, manage the patient as a whole not only his symptoms or current problem
(Example: IMNCI Strategy in Paediatrics), able to communicate effectively; provide proper counseling for disease prevention and health promotion.

OVERVIEW OF CURRICULUM DEVELOPMENT

Curriculum outcomes should reflect the mission and vision statements of the University



*Kern,D.E.(1998).*Curriculum development for medical education: A six-step approach*. Baltimore: Johns Hopkins University Press

TOTAL TEACHING HOURS FOR UNDERGRADUATE MEDICAL EDUCATION (MBBS) CURRCULUM

Pre-clinical and Para-clinical Sciences	= 2875
Clinical Sciences (Medicine and allied)	= 1700
Clinical Sciences (Surgery and allied)	= 1625
Grand Total: 2875+1700+1625	= 6200 Hours

Subject	Hours
Anatomy	500
Physiology	450
Medical Biochemistry	250
Pharmacology & Therapeutics	300
Pathology	500
Community Medicine and Public Health	200
Basics of Radiology	25
Research and EBM	100
Pakistan Studies/ Ideology and Pakistan Constitution	25
Islamiyat /Ethics for Non-Muslim	25
Quran Kareem Introduction to Computer Expository Writing Leadership Professionalism Arts & Humanities (one course) Communication Skills Co-curricular activities	50 25 25 25 25 25 25 200
Forensic medicine and toxicology	100
Total	**2875**

SURGERY & ALLIED	
Subject	**Hours**
General Surgery	600
Anesthesia	50
Critical care	50
Orthopedics & Trauma	100
• **Any three of the sub-specialties:**• Urology, Neurosurgery, Thoracic Surgery, Pediatric Surgery, Plastic Surgery, Vascular Surgery	225 (75 hrs each)
Ophthalmology	150
Otorhinolaryngology	150
Gynaecology and Obstetrics	300
Total	**1625**

MEDICINE & ALLIED	
Subject	**Hours**
General Medicine	600
Psychiatry & Behavioral Sciences	150
Emergency medicine & Critical Care	25
Dermatology	50
Cardiology	50
Pulmonology	50
Nephrology	50
Gastroenterology	50
Medical Oncology	25
Patient Safety Infection control	2525
Family Medicine	75
• **Any three of sub-specialties:** (For clinical rotations) Neurology, Endocrinology, Rheumatology, Geriatrics, Pediatric Cardiology	225 (75 each)
Paediatrics and Neonatology	300
Total	**1700**

Total = 6200 Contact hours

TABLE OF SPACING AND CREDIT HOURS OF SUBJECTS IN MBBS COURSE IN INTEGRATED CURRICULUM

Subject	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total Hours
Behavioral Sciences	20 Hrs	20 Hrs	20 Hrs	20 Hrs	20 Hrs	100 Hrs
Islamic & Ethics	13	12				25 Hrs
Pakistan Studies	13	12				25 Hrs
Anatomy	250 Hrs	250 Hrs				500 Hrs
Physiology	225 Hrs	225 Hrs				450 Hrs
Biochemistry	125 Hrs	125 Hrs				250 Hrs
Pharmacology			300 Hrs			300 Hrs
Pathology	15 Hrs	25 Hrs	260 Hrs	200 Hrs	-	500 Hrs
*Forensic Medicine			100 Hrs			100 Hrs
**Community Medicine	25 Hrs	25 Hrs	50 Hrs	150 Hrs	-	250 Hrs
Medicine & Allied						600 Hrs
Nuclear Medicine						75 Hrs
Emeregency Medicine						75 Hrs
Medicine Elective						-
***Psychiatry						50 Hrs
Dermatology and General Practice						50 Hrs
Critical Care						50 Hrs
Cardiology						50 Hrs
Nephrology						50 Hrs
Gastroenterology						50 Hrs
Pulmonology						50 Hrs
Paeditric Medicine						300 Hrs
Surgery and Allied						600 Hrs
****Radiology						25 Hrs
Orthopaedics						75 Hrs
Paeds Surgery						75 Hrs
Neurosurgery						75 Hrs
Surgery Elective	-					
Emergency Surgery & Anaesthesia						50 Hrs
Critical care						50 Hrs
Urology						50 Hrs
Obstetrics & Gynaecology	10 Hrs	10 Hrs	50 Hrs	100 Hrs	130 Hrs	300 Hrs
Opthalmology						150 Hrs
Otorhinolaryningology						150 Hrs
Clinical Pathological Conferences						60 Hrs
Research and EBM (Divided by Community Medicine & Medicine)						100 Hrs
Quran Kareem						50 Hrs
Expository Writing						25 Hrs
Professionalism						25 Hrs
Leadership						25 Hrs
Introduction to Computer						25 Hrs
Arts & Humanities (one course)						25 Hrs
					Total	6200 Hrs

*Bioethics will be taught in the Forensic Medicine
***Behavioral sciences will be taught in the Community Medicine

**Biostatistics will be taught in the Community Medicine
****Biophysics will be taught in the Radiology

GENERAL EDUCATION HOURS PRESCRIBED IN THE UNDERGRADUATE EDUCATION POLICY OF THE HIGHER EDUCATION 2020

PM&DC has adapted in its 2021 accreditation document to add modules on general education as under:

1. Breadth Courses:

A. Arts and Humanities: 6 Credit Hours 90 Teaching Hours

History of Medicine 45 Hours

Philosophy and Creative Arts 45 Hours

B. Social Sciences 6 Credit Hours 90 Teaching Hours

Behavioral Sciences 45 Hours

Psychology 45 Hours

C. Natural Sciences

6 Credit Hours 90 Teaching (Covered in Teaching of Basic Medical Sciences)

2. Foundation Skill Courses

A, Expository Writing 9 Credit Hours 135 Teaching Credit Hours

Embedded in Writing Skills for Research Methodology (45 Hours)

Editing Skills Use of computer software (45 hours)

Translation from another language (45 hours)

B. Quantitative Writing 6 Credit Hours 90 Teaching Hours

Embedded Statistics and use of information technology (45 hours)

Algorithms and Logical Constructs (45 hours)

3. Civilization Courses

Pakistan Studies 1 Course 3 Credit Hours 45 Teaching Hours

Islamiyat/ Religious Studies 1 Course 3 Credit Hours 45 Teaching Hours

OUTLINE OF SYLLABUS CONTENT

Major Subjects like Anatomy, Physiology, Biochemistry, Pharmacology, Pathology, Community Medicine, Forensic Medicine, Ophthalmology, Otolaryngology, Medicine, Surgery, Gynae and Obstetrics and Paediatrics will have syllabus content based on syllabus content as given in PMDC curriculum document, 2024. Clinical Methods and Research Methods, Diagnostics and Radiology will be taught along with major disciplines with the relevant topics. The detail content and time table will be published in yearly syllabus book and modular study guides. Table of spacing and Credit hours ll follow. Details of other learning areas is given as under.

BEHAVIORAL SCIENCES

1. Introduction to Behavioral Sciences and its importance in health.

- Bio-Psycho-Social Model of Health Care and the systems Approach in
- Normality vs Abnormality
- Link of Health with Behavioral Sciences (Psychology, Sociology, Anthropology)
- Importance of behavioral sciences in health
- Correlation of brain, mind and Behavioral Sciences
- Roles of a doctor
- Desirable Attitudes in Health Professionals

2. Understanding Behavior- Sensation and sense organs, Perception, Attention and concentration, Memory, Thinking, Communication

- Describe sensation, sense organs
- Define perception, factors affecting perception
- Abnormalities of Perception
- Extrasensory perception (ESP)
- Define attention and concentration, factors affecting them
- Define memory and describe its stages, types and methods to improve it
- Define thinking, describe its types and theories.
- What is cognition and what are levels of cognition.
- Discuss problem solving and decision making strategies
- Define communication. What are the types, modes and factors affecting it? Describe ways to recognize non-verbal cues. Characteristics of a good communicator.

3. Individual differences - Personality, Intelligence

- What are the stages and characteristics of psychological growth and development?
- Define personality. What are cognitive and psychodynamic theories of personality?
- What factors affect personality development?
- How personality can be assessed? Influence of personality in determining reactions during health, disease, hospitalization, stress.
- Define intelligence and the various types of intelligence. Relevance of IQ and EQ in the life of a doctor. Methods of enhancing EQ and effectively using IQ
- What factors affect it and how it can be assessed?

4. Emotions - Motivation/need/drive

- Define emotions. What are the various types of emotions?
- Emotional Quotient (EQ), concept and utility, emotional literacy
- Define motivation and what are the types of motivation?
- Use of motivational theory in improving learning, treatment adherence.

5. Learning

- Define learning, Principles of learning, modern methods and styles of learning, types of learners, cognitive theory of learning and its use in enhancing learning.
- Strategies to improve learning skills.

6. Stress and stressors

- Define and classify stress and stressors
- Relationship of stress and stressors with illness

7. Life events - Psychotrauma

- Concept of life events and their relationship with stress and illness

8. Stress management

- What are coping skills?
- What is psychological defense mechanism?
- What is conflict and frustration?
- What is the concept of adjustment and maladjustment?

9. Interviewing/psychological History Taking

- Collecting data on psychological factors in Medicine/Surgery/Gynae/
- Pediatrics and other general health conditions
- Skill of interviewing and listening

10. Doctor-Patient relationship

- Discuss the doctor-patient relationship
- What is the concept of boundaries and psychological reactions in doctor patient relationship (such as transference and counter transference)?

11. Medical/dental Ethics

- Hippocratic Oath-Do's and Don'ts
- What is the concept of medical/dental ethics?
- Common ethical dilemmas in doctor patient relations, interaction with families, teachers, colleagues, pharmaceutical industry
- Rights of patients and doctors (in international law, constitution of Pakistan, PM&DC, Islam)
- E-consultation and Telemedicine
- Euthanasia and physician assisted suicide
- Relationship with pharmaceutical Industry

12. Culture and medical/dental practice

- Concept of group, its dynamics
- Attitude, value, belief, myths, social class, stigma, sick role and illness, health belief models

13. Psychological reactions

- Grief and bereavement, family and illness, dealing with difficult patients
- Symptoms presentation and culture
- Illness and behavior (sick-role, stigma, somatization)
- Treatment Adherence (Compliance)
- What are the psychological aspects of illness, hospitalization, rape, torture, terminal illness, death and dying?

14. Psychological aspects of Health and Disease

- Psychological correlates of hospitalization, illness behavior, sick-roles
- Psychological issues in Emergency Departments, Intensive Care and Coronary Care Units, Operating Theaters, Cancer wards, Transplant Units, Anaesthesia

15. Breaking bad news

- Introduction, Models, Methods, Death of the patient, abnormal baby, intractable illness

16. Pain, Sleep, Consciousness, Sexuality

- Concept of Pain
- Physiology of pain, Psychosocial assessment and management of chronic/intractable pain.
- Stages of sleep
- Physiology of consciousness, altered states of consciousness
- Psychological influences on sleep and consciousness
- Non-pharmacological methods of inducing sleep, changes in consciousness
- Physiology of Sex, stages of sexual activity, Reproduction and Health

17. Communication skills, Counseling, Crisis Intervention, Conflict Resolution, Informational Care

- Principles of effective communication, active listening, the art of questioning, the art of listening.
- Good and bad listener.
- Counseling: Scope, indications and contraindications, steps, Do’s and Don’ts. How to deal with real life crisis and conflict situations in health settings
- Informational Care: A practical method of communication between the doctor and patient about disease, drugs, prognosis etc.

18. Non-pharmacological interventions

19. Child rearing practice

- What is the concept of child rearing practice and its effect on individual and illnesses?

Research Methodology & Biostatistics

1. What is Research?
2. How to select A Research Question. Selecting a Research Question.
3. How to develop, survey
4. Data Collection.
5. Data Compilation.
6. Preparation of a Presentation
7. Analysis.
8. Report Writing.
9. Types of study Design.
10. Bio Statistics.
11. Variables & their types.
12. Synopsis writing.
13. Surfing Net for back ground information.
14. Sample Size Calculation & its importance
15. Confidence Interval.
16. P. Value
17. Analysis List
18. Budget Planning.
19. Writing a Research Grant Proposal.
20. Evidence Based Medicine.
21. Review of Literature.
22. Meta- Analysis.
23. Journal Club.

PATIENT SAFETY

1. Introduction to Patient Safety
2. From Error to Harm
3. Human Factors and Safety
4. Teamwork and Communication
5. Responding to Adverse Events
6. Root Cause Analyses and Actions
7. Achieving Total Systems Safety
8. Pursuing Professional Accountability and a Just Culture
9. Health Informatics 10. AI 11. QA 12. Healthcare Financing 13. Time Management 14. Self-care 15. Prevention of burnout

PATIENT SAFETY TOPICS

S.NO	YEAR	TOPIC
1.	FIRST YEAR MBBS	Introduction of patient Safety
2.		Importance and steps of hand washing
3.	SECOND YEAR MBBS	Introduction of patient Safety
4.		Importance and steps of hand washing
5.		Standard protocols of Patient Safety
6.	THIRD YEAR MBBS	Introduction of patient Safety
7.		Importance and steps of hand washing
8.		Standard protocols of Patient Safety
9.		Importance of Gown/ Gloves wearing
10.		Importance of Documentation
11.	FOURTH YEAR MBBS	Introduction of patient Safety
12.		Importance and steps of hand washing
13.		Standard protocols of Patient Safety
14.		Gloves/ Gown Warning
15.		Importance of Documentation
16.	FINAL YEAR MBBS	Introduction of patient Safety
17.		Importance and steps of hand washing
18.		Standard protocols of Patient Safety
19.		Needle Stick injury
20.		New born Care
21.		Important of Documentation
22.		Dialysis care
23.		Paeds Nursing Care
24.		O.T instrumed steoyloutu
25.		MRSA prevention

SKILL LAB TOPICS

Orientation about skill lab	Intra uterine contraceptive Technique
Use stethoscope	Syringe Pumps/ Infusion Pump
Peripheral pulse examination	PICC line
Hand washing (Scrubbing)	Forceps/ Vacuum Delivery (Gynae)
Temperature recording	Cervical Dilatation (Gynae)
BP Monitoring	PV Examination
Evaluation	Haemo Dialysis
Intramuscular Injection	Peritoneal Dialysis
Venipuncture	Local Anesthesia
I/V cannulation in adult	Suture technique
Arterial Puncture	Nebulise
Pediatric IV Line	Exam of Upper & Lower Limb Joints
Pulse Oxymetry	Infant Airways
Evaluation	Suction Machine
Urinary Catheterization: Male	Pulse oximetry
Urinary Catheterization: Female	Ophthalmology
Cardiac Examination	Otosocpy
Spirometery	Taking blood culture sample
Laryngoscope	Arterial blood gas sampling
Endo Tracheal Intubation	Measure capillary blood glucose, urine multiple stick test
Evaluation	ECG
Examination of Breast	Taking a swab for gram's staining & culture patient moving / transfer technique
Examination of Testis	Oxygen administration /prescription of oxygen preparation and administration of injectable medicine
Examination of Prostate	Carry out safe blood transfusion
Examination of Eye	Carry out wound care and wound dressing
Examination of Ear	Apply splint for fracture
Peritoneal Dialysis	Interpretation of X-Ray of upper and lower limb
Nasal Hemorrhage	Measuring CVP
Evaluation	Interpretation of X-Ray: chest , abdomen and pelvis
Nasogastric Tube Insertion + suction	BLS
Normal vaginal Delivery	Nutritional assessment calculate BWI nutritional counseling

Modular System as Suggested By PM&DC:
37 Integrated Modules
170 Weeks
Basic Medical Sciences integrated with Relevant Clinical Disciplines.
Pathology, Pharmacology.
Clinical Disciplines started from first year.

EMERGENCY MEDICINE

Cardio-circulatory Diseases:

- Acute coronary syndrome and myocardial infarction
- Pathophysiology of circulatory shock
- Congestive heart failure
- Sepsis
- Aortic aneurysm and dissection
- Hypertensive Crisis

Respiratory Compromising Diseases

- Chronic obstructive pulmonary disease, asthma and pneumonia
- Pulmonary embolism and deep venous thrombosis
- Pneumothrorax

Neurological

- Stroke
- Nerve Compression
- Cauda Equina
- Peripheral Nerve injuries

Abdominal Emergencies

- Appendicitis
- Bowel obstruction
- Diseases of the gall bladder and biliary system
- Acute abdomen
- Gastrointestinal bleeding
- Peritonitis

Orthopedic

- Hip fractures
- Wrist fractures
- Ankle fractures
- Spinal Fractures

Nephrological Emergencies

- Kidney stones
- Urosepsis

Toxicology

- Poison
- Overdose
- Chemical Ingestion

Basic knowledge of trauma care

- Head injury
- Chest trauma
- Abdominal trauma
- Extremity trauma
- Facial trauma
- Spinal cord injury
- Genitourinary trauma
- Pelvic trauma
- Soft tissue injury
- Burn Management

Burn injuries

- Different types of burns
- The pathophysiology of burns
- Assessment of the area and depth of burns
- Management of burn patients

FAMILY MEDICINE

Outcomes:

By the end of the academic Year 5 students will be able to:

- Discuss the salient diagnostic features of the common conditions prevailing in the community.
- Should be able to formulate the differentials on the basis of presenting symptoms.
- Suggest and interpret investigations to confirm diagnosis.
- Discuss relevant management plan of the common conditions in the community.

TOPICS
Cough
Chest pain
Abdominal pain
Joint pain
Generalized weakness and weight loss
Unwell child
Headaches
Urogenital (Men and Women)
Mental health
Skin Conditions
Any other conditions

Basic Microbiology for Infection Prevention & Control
• Introduction to Healthcare associated infections • Standard Precautions • Transmission based precautions • Infection prevention and control aspect of occupational health in healthcare settings • Waste management in healthcare setting • Cleaning, disinfection and sterilization of reusable surgical instruments and medical devices • Investigation of outbreak in Healthcare institutions • Preventing Hospital acquired Pneumonia • Preventing maternal and new born infections in Healthcare settings • Preventing healthcare Associated diarrhea • Work practices in healthcare facilities • Environmental cleaning • Managing Food and water services for the prevention of Healthcare associated infections • Structure and oversight of Infections prevention & Control program • Principals of Public Health emergency preparedness and outbreak management for healthcare facilities
• Personal Protective Equipment • Use of personal protective equipment during viral hemorrhagic fever • Injection safety • Preventing intravascular catheter associated blood borne infections

- Hand Hygiene
- Sharpe injuries & management of exposure to blood borne pathogens
- Prevention of surgical site Infections
- Preventing catheter associated Infections
- Processing of reusable healthcare clothing

BASICS OF RADIOLOGY

1. The basic principles of radiation protection and know the law in relation to the use of ionizing radiation
2. Principles of different imaging techniques and their advantages and disadvantages in different clinical scenarios (X-ray, ultrasound, CT-Scan, MRI, Fluoroscopy)
3. Role of imaging in directing treatment in various surgical scenarios
4. How to request imaging and interpreting images
5. Hazards of imaging and ionizing radiation
6. Wasteful use of radiology
7. Typical effective doses from diagnostic medical exposure

ANAESTHESIA

PRINCIPLES OF ANAESTHESIA AND PAIN MANAGEMENT

1. Key principles of general anesthesia
2. Pre-operative assessment of patients and pre-medication
3. Preparation of patient for general anesthesia
4. Management of airway during general anesthesia
5. Intravenous Anesthetic agents
6. Inhalational Anesthetic agents
7. Muscle relaxation and artificial ventilation during general anesthesia
8. Monitoring and care of patient during general anesthesia
9. Recovery from Anesthesia
10. Complications of general anesthesia and their management
11. Regional anesthesia (spinal, epidural, nerve blocks)
12. Complications of regional anesthesia and their management
13. Perioperative Management
14. Acute and chronic Pain Management
15. Postoperative care
16. ICU Monitoring

MODULAR OR SYSTEM-BASED CURRICULUM HOURS AS PROPOSED IN THE 2021 PM&DC DOCUMENT

No.	Name of Module		Weeks
1	Introduction to the Study of Medicine		**2**
2	Cell and Genetics	Anatomy, Physiology, Biochemistry, relevant clinical disciplines	**4**
3	Information Technology	Library Sciences	**2**
4	Growth and Development	Relevant Basic Sciences (Anatomy, Physiology, Biochemistry, Pathology, Pharmacology, Community Medicine relevant clinical disciplines	**2**
5	Gastrointestinal Tract & Hepato-biliary System	Basic Sciences, Community, Medicine relevant clinical disciplines.	**4**
6	Nutrition	Biochemistry, Community Medicine, relevant clinical disciplines	**3**
7	Blood & Related Disorders	Basic Sciences, Community, Medicine relevant clinical disciplines.	**3**
8	Homeostasis	Physiology, Biochemistry, Medicine	3

9	Cardiovascular System	Basic Sciences, Community, Medicine relevant clinical disciplines.	**4**
10	Respiratory System	Basic Sciences, Community, Medicine relevant clinical disciplines.	**4**
11	Genitourinary System	Basic Sciences, Community, Medicine relevant clinical disciplines.	**3**
12	Reproductive System and Reproductive Health	Basic Sciences, Community, Medicine relevant clinical disciplines.	**3**
13	Endocrine System	Basic Sciences, Community, Medicine relevant clinical disciplines.	**4**
14	Special Senses and Head and Neck	Basic Sciences, Community, Medicine relevant clinical disciplines.	**4**
15	Locomotion	Basic Sciences, Community, Medicine relevant clinical disciplines.	**6**
16	Nervous System and Behavioral Sciences	Basic Sciences, Community, Medicine relevant clinical disciplines.	**8**
17	Inflammation and Neoplasia	Pathology, Microbiology and relevant clinical disciplines	**4**
18	Immunity, Infectious	Pathology, Microbiology and	**8**

	agents & Infections	relevant clinical disciplines	
19	Community Medicine	Community Medicine, Health Systems (including District Health Departments).	**12**
20	Medical Ethics		**2**
21	Forensic Medicine	Forensic Medicine, Basic Sciences, Community Medicine relevant Clinical disciplines.	**4**
22	Clinical Methods**	Interspersed in Medicine, Surgery, Obstetrics and Gynaecology, Paediatrics, ENT, Eye	**4**
23	Medicine	General Medicine and specialty rotations, Community Medicine and Pathology and Therapeutics	**12**
24	Medicine Subspecialty Rotations relevant to medical students	General Medicine and specialty rotations, Community Medicine and Pathology and Therapeutics	**4**
25	Psychiatry* and Behavioral Sciences	Psychiatry, Community Medicine	**4**
26	Dermatology	Dermatology, Medicine, Community Medicine	**2**
27	Surgery	General Surgery	**12**
28	Urology 2		**2**
29	Orthopedics & Traumatology	Orthopedic surgery, Surgery and Emergency Medicine	**2**
30	Radiology	Radiology	**2**
31	Obstetrics,	Obstetrics and Gynaecology,	**10**

	Gynaecology and Reproductive Health	Medicine, Paediatrics, Community Medicine.	
32	Paediatrics	Paediatrics, Obstetrics and Gynaecology, Community Medicine	**8**
33	Community Paediatrics	Paediatrics, Preventive Paediatrics, Community Medicine, Family Medicine	**2**
34	Ophthalmology	Ophthalmology, Medicine, Community Medicine	**4**
35	Otorhinolaryngology	ENT and Community Medicine	**4**
36	Accident and Emergency/Casualty		**4**
37	Electives	In any field, including research electives.	**8**
		Total allocated weeks	**170**

LUMHS Adaptation of Integrated Modular System

10 Semesters /Sessions

30 Modules

Modular Multidisciplinary Teaching/ Block Multidisciplinary Assessment

20 % Internal Evaluation

80 % Annual

Concurrent: Practical Skills, Research, IT, Communication Skills, Ethical and Behavioral Sciences

5-YEAR CURRICULAR PLAN for undergraduate (MBSS) study

Liaquat University of Medical and Health Sciences, Jamshoro

<table>
<tr><th>SPIRAL</th><th>YEAR</th><th colspan="5">Modules</th></tr>
<tr><td rowspan="4">FIRST SPIRAL</td><td rowspan="2">I</td><td>PRE- FOUNDATION MODULE
Introduction to Anatomy, Physiology, Biochemistry, Pathology, Pharmacology, Microbiology, Community Medicine & Behavioral Sciences
1 Week</td><td>FND-S (Foundation Module)
Basics of Anatomy, Physiology, Biochemistry, Gen. Pathology, Gen. Pharmacology, Community Medicine, Bio Ethics, IT, Behavioral Sciences, Genetics and Microbiology.
8 Weeks</td><td colspan="3">HEM- S 1- Blood and Immunity Module
8 Week</td></tr>
<tr><td colspan="2">LCM- S 1- Locomotor System
Bones, Joints, Nerves & Muscles, 9 weeks</td><td>RSP- S 1- Respiratory System 5 weeks</td><td>CVS- S 1- Cardiovascular System 5 weeks</td></tr>
<tr><td rowspan="2">II</td><td>NEU- S 1- Nervous System,
8 weeks</td><td>H&N-S-1
Head & Neck & Special Senses, 5 weeks</td><td>END-S1- Endocrinology
4 weeks</td><td rowspan="2">RPD- S 1 Reproductive System
4 weeks</td></tr>
<tr><td colspan="2">GIL-S 1-GIT and Liver
9 weeks</td><td>EXC- S 1- Renal and Excretory System
6 weeks</td></tr>
<tr><td rowspan="2"></td><td rowspan="2">III</td><td>IND- S 1- Infectious diseases
4 weeks</td><td>HEM- S 2 Hematology & Oncology
8 weeks</td><td>RSP- S 2- Respiratory System
4 weeks</td><td>CVS- S 2- Cardio-vascular System
4 weeks</td></tr>
<tr><td colspan="2">GIL- S 2-GIT and Liver (including Nutritional Disorders)
8 weeks</td><td>END- S 2- Endocrinology</td><td>EXC- S 2- Renal &</td></tr>
</table>

<table>
<tr><td rowspan="6">SECOND SPIRAL</td><td></td><td colspan="2"></td><td>4 weeks</td><td>Excretory System
4 weeks</td></tr>
<tr><td></td><td colspan="5">In one half of the classes Ophthalmology module and in other half ENT subject module will be covered in teaching session. The students of two halves will be exchanged vice versa in later half of year.</td></tr>
<tr><td rowspan="4">IV</td><td>Eye/ENT (OPH/ENT - S 1)

3 weeks</td><td>RPD-S 2- Reproductive System

6 weeks</td><td colspan="3">NEU-S 2- Neurosciences and Psychiatry
6 weeks</td></tr>
<tr><td colspan="3">EYE/ENT (OPH/ENT - S 1) 3 weeks</td><td colspan="2">Infectious disease (IND- S 2) 3 weeks</td></tr>
<tr><td>Orthopedics & trauma, (Orth- S2)
4 weeks</td><td>DPS-S2- Dermatology Plastic Surgery / Burns
3 weeks</td><td colspan="3">Community Medicine (COM-D) 8 weeks</td></tr>
<tr><td colspan="5"></td></tr>
<tr><td rowspan="3">THIRD SPIRAL</td><td rowspan="3">V</td><td colspan="5">In one half of the classes Medicine, Allied subject modules and Paediatrics; in other half Surgery & Allied subject modules and Gynaecology and Obstetrics will be covered in teaching session. The students of two halves will be exchanged in later half of year vice versa.</td></tr>
<tr><td colspan="2">Clinical Rotation 8:30 to 1:00 (with Ambulatory, Emergency, Intensive care) In Medicine, Pediatrics, Cardiology and Neurology units
• Lecture/Demo on problem-based approach, twice a week
• Ward tutorial twice a week
• Student research presentation once a week</td><td colspan="3">Clinical Rotation 8:30 to 1:00(Inpatient, Ambulatory, Emergency, Intensive care and Operation Theatres)
In Surgery, Gynae & Obstetrics, Orthopedics and Neurosurgery.
• Lecture/Demo on problem-based approach, twice a week
• Ward tutorial twice a week
• Student research presentation once a week</td></tr>
<tr><td colspan="5">PARALLEL/LONGITUDINAL THEMES:
The following themes are not part of any individual module but shall run concurrently: Communication Skills, Research Methodology, leadership and Management
STAND ALONE COURSES: Study Skills, Pakistan Studies, Islamiyat, Behavioral Sciences, Bio-Medical Ethics, IT</td></tr>
</table>

Organization of Curriculum document by LUMHS Jamshoro

<table>
<tr><td>Spirals</td><td colspan="5">Years</td></tr>
<tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>First Spiral</td><td colspan="2">Basic Sciences + Clinical Sciences (20%)</td><td colspan="3"></td></tr>
<tr><td>Second Spiral</td><td colspan="2" rowspan="2"></td><td colspan="2">Basic Sciences + Clinical Sciences (40%)</td><td></td></tr>
<tr><td>Third Spiral</td><td colspan="2"></td><td colspan="2">Clinical Sciences+ Basic Sciences (20%*)</td></tr>
</table>

YEAR WISE DISTRIBUTION OF MODULES IN 1st,2nd,3rd, & 4th YEARS BY LUMHS

YEAR	S.No	MODULES	MODULE SUBJECTS
ONE	1	Foundation Module-I	Anatomy, Physiology, Biochemistry, Pathology, Pharmacology+ clinical applications
	2	Blood Module-I	
	3	Locomotor Module-I	
	4	Respiratory Module-I	
	5	Cardiovascular Module-I	
	6	Self directed learning skills	Stand alone
	7	Medical Ethics and Professionalism	Longitudinal/Parallel
	8	Communication Skills	Longitudinal/Parallel
	9	Community Medicine	Longitudinal/Parallel
	10	Research Methodology	Longitudinal/Parallel
	11	Information technology	Longitudinal/Parallel
			FIRST PROFESSIONAL EXAM

YEAR	S.No	MODULES	MODULE SUBJECTS
TWO	1	GIT AND LIVER	Anatomy, Physiology, Biochemistry, Pathology, Pharmacology+ clinical applications
	2	Renal and excretory System-I	
	3	Endocrinology-I	
	4	Reproductive System-I	
	5	Neurosciences-I	
	6	Head & Neck & Special Senses	
	7	Pakistan Studies	Stand alone
	8	Islamiyat	Stand alone
	9	Community medicine	Longitudinal/Parallel
	10	Patient safety	Longitudinal/Parallel
	11	Research methodology	Longitudinal/Parallel

YEAR	S.No	MODULES	MODULE SUBJECTS
THIRD	1	Foundation Module-II	Pathology, Pharmacology, Forensic Medicine+ clinical applications
	2	Infectious Disease	
	3	Hematology Module-II	
	4	CVS-II	
	5	Respiratory-II	
	6	GIT-II	
	7	Endocrine-II	
	8	Renal-II	
	9	Reproductive System-II	
	10	Musculoskeltal-II	
	11	Neurosciences-II	
	12	Forensic Medicine	
	13	Self directed learning skills	Stand alone
	14	Medical Ethics and Professionalism	Longitudinal/Parallel
	15	Communication Skills	Longitudinal/Parallel
	16	Community Medicine	Longitudinal/Parallel
	17	Research Methodology	Longitudinal/Parallel
	18	Information technology	Longitudinal/Parallel
			THIRD PROFESSIONAL EXAM

YEAR	S.No	MODULES	MODULE SUBJECTS
FOURTH	1	Ophthalmology	Pathology, Community Medicine, ENT, EYE + clinical applications
	2	ENT	
	3	Orthopedic & Trauma	
	4	Neurosurgery	
	5	Neurosciences	
	6	Cardiology-III	
	7	Renal-III	
	8	Dermatology, Plastic Surgery	
	9	Research Project	
	10	Self directed learning skills	Stand alone
	11	Medical Ethics and Professionalism	Longitudinal/Parallel
	12	Communication Skills	Longitudinal/Parallel
		Community Medicine	Longitudinal/Parallel
		Research Methodology	Longitudinal/Parallel
		Information technology	Longitudinal/Parallel
			FOURTH PROFESSIONAL EXAM

HEC GENERAL EDUCATION COURSE REQUIREMENTS

(CREDIT HOURS TO TEACHING HOURS)

S. NO	COURSE	INDIVIDUAL COURSE	CREDIT HOURS	TEACHING HOURS	PM&DC CURRICULUM
1	**Breadth Courses**	**Arts and Humanities** (Philosophy, History and Creative Arts) Any two courses	6	90	History of Medicine (45 hours) Philosophy, Creative arts need special arrangements for teaching (45 hours)
		Social Sciences (Analysis of individual and social Behavior, and Networks. Anthropology, Economics, Psychology, Sociology, and Political Science) Any two courses	6	90	Embedded Behavioral sciences To cover individual and Social behavior (45 hours) Psychology (45 hours)
		Natural Sciences (Physics, Chemistry, Geology, Biology, and Ecology) Any two courses	6	90	Embedded Covered in Anatomy, Physiology and Biochemistry. 90 hours in total from above mentioned subjects.
2	**Foundation Skills Courses**	**Expository Writing** (Writing Skills, Scientific Writing, Editing, Translate from one language to another) Any three courses	9	135	Embedded Writing Skills as part of Research Methodology. (45 hours) Editing Skills Use of computer software (45 hours) Translation from another language (45 hours)
		Quantitative Reasoning (Information Technology, Algorithms and Logical constructs) Any two courses	6	90	Embedded Statistics and use of information technology (45 hours) Algorithms and Logical Constructs (45 hours)
3	**Civilization Courses**	**Pakistan Studies** One course	3	48	45 Hours
		Islamiyat One course	3	48	45 Hours
	Total		**39**	**591**	

Distribution of subjects Instructional contents into Theory and Practical learning.

Type of subject	Theory Content	Practical Skills Content
All Basic Sciences	50%	50%
Pre-Clinical Sciences (Pharmacology and Therapeutics, Forensic Medicine, Community Medicine, Pathology)	40%	60%
Clinical Sciences	30%	70%
Internship/House Job	0%	100%

Time Allocation to Curriculum Content= 7493 hours

Subject specified competencies	General competencies
80% 5994	20% 1499

Time Allocation to the Study Design (5184)

Instructions	Self Study
80% 4795	20% 1198

Time Allocation to Site of Study (4147)

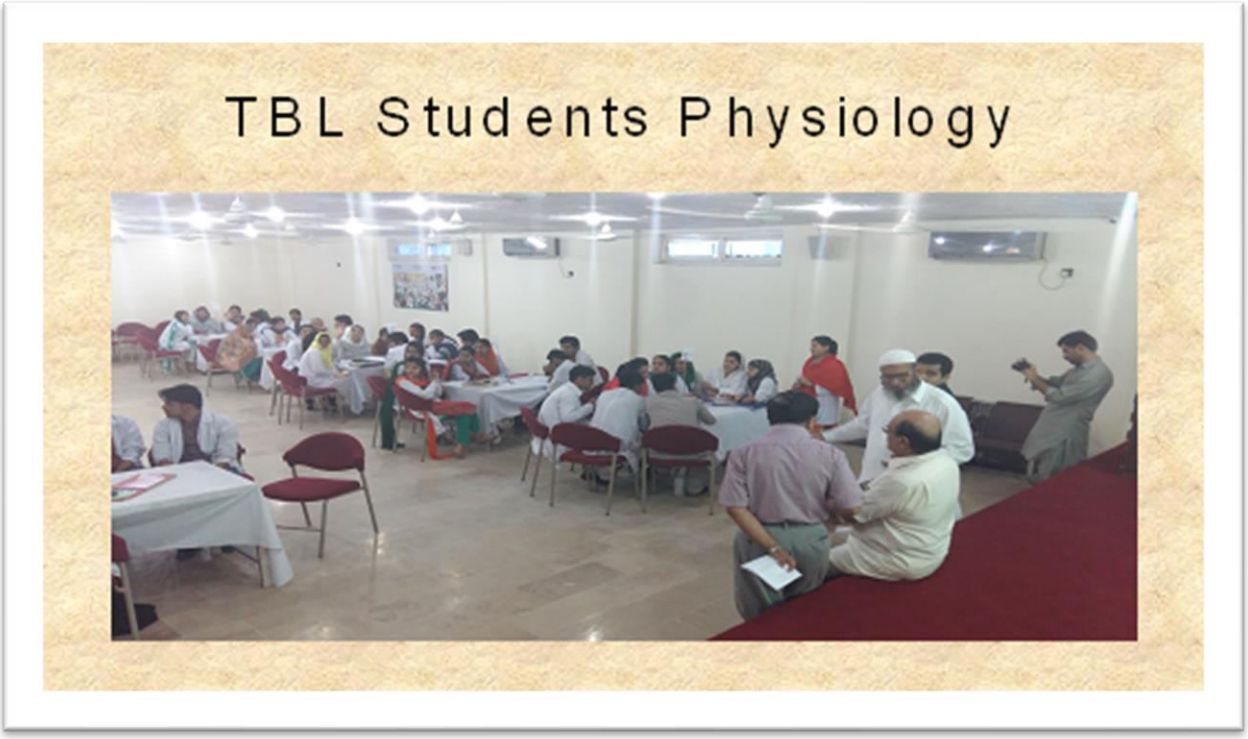
Institution Based	Community Oriented
80% 3836	20% 959

9. Instructional Methods

As already stated all evidence based modern methods of learning have been incorporated in teaching strategies along with the traditional modes of transfer of knowledge. Lectures, practical, demonstrations, seminar and symposia, clinic pathological conferences will be conducted. More emphasis is given to small group teaching. Modern methods of learning like Team Based Learning, Problem Based learning, role plays, simulation and practical skill learning in skill labs have been given maximum possible space. Methods to encourage active learning have been incorporated. Self directed learning is also given adequate share.

Instruction Method Summary

1. Problem Based Learning
2. Tutorials/Practical sessions/essential Skills and Labpractice
3. Clinical rotations and ward visits
4. Lectures/Seminars/CPC's – using modern audio-visual techniques, distant learning using electronic devices and current Information Technology facilities.Emphasis is given on interactive lecturing and clinical scenario based themes.
5. Journal Club
6. Community Based Learning
7. Team Based Learning
8. Small Group Teaching
9. Acquisition of Competencies through any othersources (Innovation by Peer Learning in Reproductive Health)
10. Clinical Pathological Conferences and basico clinical conferences.
11. Case Based Learning.
12. Paired Lectures.



Summary of different teaching methods used at IMC:

Interactive Lectures (IAL)

Practical

Demonstrations

Tutorial

CBL/SBL

Team Based Learning

Skill Lab

Bedside Teaching Clinical Session

Communication Skill Lab/ Role Plays

Digital Library

Self Study

Online Teaching:

Online teaching was conducted at IMC in all discipline. Students were informed by the online committee which designed policy and technical details for online classes. Online videos, movies and interactive lectures along with BCQs for formative assessment were made part of online teaching plan to make it more effective. A robust information management system with qualified IT personnel's and online internet time facilities were made available.

Working with a hang and AKU for Peer Learning in Reproductive and Sexual Health

Small Group Teaching

10. Curricular Management

Curricular committee manages curriculum. Indus Medical College Tando Muhammad Khan has a curricular committee which is represented on the institutional organogram. It has terms of references which include:

1. Planning,revisiting, reviewing, implementation and evaluation of the curriculum in order to ensure that graduate who are being prepared should have competencies required for a PM&DC 7 Star doctor.
2. Mapping of curriculum, revisiting educational stretegies and exploring and implementing evidence based innovative educational techniques.
3. Curricular committe has two members formally trained in medical education.
4. Curricular committee and department of medical education ensure that teaching calender of each semester is prepared and disseminated to the concerned faculty well in advance of the start of semester.
5. Curricular committee and department of Medical Education ensure that lectures, practicals, demonstrations and clinical sessions are held regularly and punctually. A SMS alert system ensures that teachers are reminded of their next scheduled class one day prior of conduction.
6. Currcicular committee and department of medical education ensure that attendance of faculty, students, topic taught and feed back is recorded and documented for labortary work, Skill lab work, OPD classes,clinical rotations and field visits.
7. Curricular committee and department of medical education ensure that log books are designed and given to students to know their study schedules, record their learning experience and get it signed from the teacher / supervisor/ facilitator.

11. Outcomes and competencies

Indus Medical College Tando Muhammad Khan aims to teach and train medical graduates to become a 7 star doctor as envisioned by Pakistan Medical Council. The program follows the basic guidelines of PM&DC and LUMHS Jamshoro to produce a graduate who has knowledge, skills and attitude of a competent medical graduate. PM&DC defines objectives of MBBS program to produce medical graduates who should be a seven star doctor as above.

Keeping these objectives in mind and as per our mission statement IMC expects following outcomes from its graduates.

After graduation an IMC MBBS graduate should have knowledge, skills and behavior needed to:

1. Manage common problems seen in community independently

2. Able to provide basic initial care to serious diseases and assist in management.

3. Recognizes signs of critical illnesses and refer to the appropriate location within the health care system after life saving actions.

4. Act professionally and ethically demonstrating respect to the culture of community

5. Shows commitment to national programs of health promotion and prevention of disease

6. Understands the national health system and is able to work within the system

7. Communicates effectively with parents, families and other stakeholders taking care of patients

8. Undertakes basic research projects and knows the importance of evidence based medicine and being a lifelong learner.

PM&DC has in its 2022 document has updated these competencies. IMC curriculum will ensure to update its curriculum to achieve these outcome competencies in its graduates.

FRAME WORK OF COMPETENCIES FOR MEDICAL STUDENTS ADOPTED BY PAKISTAN MEDICAL AND DENTAL COUNCIL (PM&DC). COMPETENCIES REQUIRED IN A DOCTOR TO BE ACHIEVED AT UNDERGRADUATE LEVEL PM&DC GUIDELINES.

1. Competencies are based on:
2. Patient Assessment
3. Procedural Skills
4. Patient Care
5. Prescribing
6. Therapeutic Procedures

FRAME WORK OF COMPETENCIES FOR MEDICAL STUDENTS ADOPTED BY PAKISTAN MEDICAL COMMISSION.

COMPETENCIES REQUIRED IN A DOCTOR TO BE ACHIEVED AT UNDERGRADUATE LEVEL PM&DC GUIDELINES

5 STEPS & 24 COMPETENCIES

A. PATIENTASSESSMENT

NO	PROCEDURE	DESCRIPTION	LEVEL OF COMPETENCE
1.	Take base line physiological observation and record appropriately (all wards)	Measure temperature, respiratory rate, pulse rate, blood pressure, oxygen saturations, NG output and urine output.	Safe to practice under indirect supervision
2.	Carry out systemic examination abdominal, chest, nervous system, CVS, vascular (all wards)	Systemic approach in clinical examination Complete All steps of examination and document appropriately	Safe to practice under indirect supervision
3.	Ophthalmoscopy–Eye ward rotation	Perform basic Ophthalmoscopy and identify common abnormalities	Safe to practice under indirect supervision
4.	Otoscopy- ENT Ward	Perform basic Otoscopy and identify common abnormalities	Safe to practice under indirect supervision

B. PROCEDURAL SKILLS

NO.	PROCEDURE	DESCRIPTION	LEVEL OF COMPETENCE
5.	Blood cultures	Take samples of venous blood to test for the growth of infectious organisms in proper culture bottles	Safe to practice under direct supervision
6.	Carry out arterial blood gas and acid base sampling from the radical artery in adults	Insert a needle in to a Patient's radial artery (in the wrist) to take a sample of arterial blood and interpret the results. Use appropriate measures to prevent hematoma Formation at the site	Safe to practice under direct supervision
7.	Carry out Veni puncture	Insert a needle in to a patient's vein to take a sample of blood for testing. Make sure that blood samples are taken in the correct order, placed in the correct containers, that these are labeled correctly and sent to the laboratory promptly	Safe to practice under indirect supervision
8.	Measure capillary blood glucose	Measure the concentration of glucose in the patient's blood at the bedside using appropriate equipment. Record and inter prêt the results.	Safe to practice under indirect supervision
9.	Carry out a urine multi dipstick test	Explain to patient how to collect a midstream urine sample. Test a sample of urine to detect abnormalities. Perform a pregnancy test where appropriate.	Safe to practice under indirect supervision
10.	Carry out a 3-and 12-leadelectrocardiogram	Set up a continuous recording of the electrical activity of the heart, ensuring that all leads are Correctly placed.	Safe to practice under indirect supervision

11.	Take and/or instruct patient show to take a swab	Use the correct technique to apply sterile swabs to the nose, throat, skin and wounds. Make sure that samples are placed in the correct containers, that they are labeled correctly and sent to the laboratory promptly and in the correct way.	Safe to practice under indirect supervision for nose, throat, skin or wound swabs

C. PATIENT CARE

NO	PROCEDURE	DESCRIPTION	LEVEL OF COMPETENCE
12.	Perform surgical scrubbing up	Follow approved processes for cleaning hands and wearing appropriate personal protective equipment before procedures or surgical operations	Safe to practice under direct supervision
13.	Set up an infusion	Set up run through and intravenous infusion. Have awareness of the different equipment and devices used.	Safe to practice under direct supervision
14.	Use correct techniques for moving and handling, including patients who are frail	Use, and/ or direct other team members to use, approved methods for moving, lifting and handling people or objects, in the context of clinical care, using methods That avoid injury to patients, colleagues ,or oneself	Safe to practice under indirect supervision

D. PRESCRIBING

NO	PROCEDURE	DESCRIPTION	LEVEL OF COMPETENCE
15.	Instruct patients in the use of devices for inhaled medication	Explain to a patient how to use an inhaler correctly, including spacers, and check that their technique is correct. Should know about variously types of Inhalers	Safe to practice under direct supervision
16.	Prescribe and administer oxygen	Prescribe and administer oxygen safely using a delivery method appropriate for the patient's needs and monitor and adjust oxygen as needed. Knows the exact volume given per minute	Safe to practice under direct supervision

17.	Prepare and administer inject able (intramuscular, subcutaneous, intravenous) drugs	Prepare and administer inject able drugs and prefilled syringes Knows about various channels of CVP	Safe to practice under direct supervision

E. THERAPEUTIC PROCEDURES

NO	PROCEDURE	DESCRIPTION	LEVEL OF COMPETENCE
18.	Carry out intra venous annulations	Insert a cannulain to a patient's vein and apply an appropriate dressing.	Safe to practice under direct supervision
19.	Carry out safe and appropriate blood transfusion	Following the correct procedures, give a transfusion of blood (including Correct identification of the patient and checking blood groups). Observe the patient for possible reactions do the transfusion, and take Action if they occur.	Experienced in a simulated setting; further training required before direct supervision
20.	Carry out male and female urinary catheterization	Insert a urethral catheter in both male and female patients. Should know its complications and management	Safe to practice under direct supervision
21.	Carry out wound care and basic wound closure and dressing	Provide basic care of surgical or traumatic wounds and apply dressing appropriately.	Safe to practice under direct supervision
22.	Carry out nasogastric tube placement	Pass a tube into the stomach through the nose and throat for feeding and administering drugs or draining the stomach' contents. Should know how to ensure correct placement.	Safe to practice simulation
23.	Use local anesthetics	Inject or topically apply a local anesthetic. Understand maximum doses of local anesthetic agents.	Safe to practice under direct supervision
24.	Apply splint for fractures	Can apply routine splints for fractures like Thomas, Neck of femur	Safe to practice under direct supervision
25.	Interpretation of X-rays of upper and lower limbs	should be able to identify gross musculoskeletal pathology on X-rays	safe to practice under indirect supervision
26.	Interpretation of x-rays of chest, abdomen and Pelvis	should be able to identify rib fractures, hemo thorax, pneumonia thorax, free air under diaphragm, pelvic fractures	safe to practice under direct supervision

27.	Measure CVP (central venous pressure)	should be able to measure, interpret and monitor central venous pressure readings	safe to practice under direct supervision
28.	Should be able to perform essential life saving Procedure (BLS)	(Tracheotomy, endo tracheal intubation and chest intubation. Should be competent at Basic Life Support)	safe to practice under direct supervision
29.	Digital rectal examination and Proctoscopy	Should know common causes of bleeding per rectum and common per anal diseases and be able to diagnose them by means of digital rectal Examination and proctoscopy.	safe to practice under direct supervision
30.	Nutritional assessment	Calculate BMI, carry out nutritional assessment of patients and guide them according to their caloric requirements	safe to practice under direct supervision

12. Assessment

Indus Medical College Tando Muhammad Khan is affliated with **Liaquat University of Medical and Health Sciences Jamshoro** for assessment. College ensures facilitating students to appear in the examination at University and holding of the components of examination at its campus. Transparency, decorum and fairness is ensured at each aspect of assessment. Periodical review is done of the results of each session to find out the strength and weaknesses of learning, teaching and curricular issues to be addressed.

Assessment Areas

A separate examination department in liason with concerned officials of the University Controller of Examination has been established. A policy defining clear process of transparent assessment has been devised in liason with University. Policy ensures that assessment method are compatible with instruction methods and helpful in achieving the outcomes as outlined earlier.

It ensures that all domains of competencies in the area of Knowledge, Skills, Attitude , Professionalism and Communication are part of the assessment.

Assessment Review

All evidence based assessment methods like SBQs, SEQs, OSPE and OSCE are applied in the assessment process.

A Quality Assurance Cell in collaboration with university ensures transparent and evidence based procedures before, during and after the assessment. External examiners are part of paper setting and practical examinations. Appeal system for students is as per university rules. Assessment standards are reviewed and set for items used in examinations.

SCHEME OF STUDIES

PROFESSIONAL MBBS EXAMINATIONS

a. First Year MBBS Examination:

To be held at the end of the 1st year in the following subjects in course work completed in the first year:

I. Anatomy and Histology	
One Paper:	90 Marks
Internal Evaluation	10 Marks
Oral & Practical	90 Marks
Internal Evaluation	10 Marks
Total	200 Marks

II. Physiology	
One Paper:	90 Marks
Internal Evaluation	10 Marks
Practical & Oral Exam:	90 Marks
Internal Evaluation	10 Marks
Total	200 Marks

III. Biochemistry	
One Paper:	45 Marks
Internal Evaluation	05 Marks
Oral & Practical	45 Marks
Internal Evaluation	05 Marks
Total	100 Marks

b. <u>Second Year MBBS Examination</u>:

I. Anatomy and Histology	
One Paper:	90 Marks
Internal Evaluation	10 Marks
Oral & Practical	90 Marks
Internal Evaluation	10 Marks
Total	200Marks

II. Physiology	
One Paper:	90 Marks
Internal Evaluation	10 Marks
Practical & Oral Exam:	90 Marks
Internal Evaluation	10 Marks
Total	200Marks

III. Biochemistry	
One Paper:	45 Marks
Internal Evaluation	5 Marks
Oral & Practical	45 Marks
Internal Evaluation	5 Marks
Total	100 Marks

*Note:

Any students who fail to clear the first Professional MBBS First Year MBBS & Second Year MBBS examination separately in Fourth chances availed or un-availed after becoming eligible for each examination shall cease to become eligible for further medical education in Pakistan.

a. Third Year MBBS Examination:

To be held at the end of the 3rd year in the following subjects:

I. Pharmacology & Therapeutics	
Theory	135Marks
Internal Evaluation	15 Marks
Oral & Practical	100Marks
Animal experiment	35 Marks
Internal evaluation	15 Marks
Total	300 Marks

II. Pathology General & Microbiology	
Theory	135 Marks
Internal Evaluation	15 Marks
Practical & Oral Exam	135 Marks
Internal Evaluation	15 Marks
Total	300 Marks

III. Forensic Medicine	
Theory	90 Marks
Internal Evaluation	10 Marks
Viva Voce	90 Marks
Internal Evaluation	10 Marks
Total	200 Marks

b. Fourth Year MBBS Examination:

To be held at the end of the 4th year in the following subjects:

I. Community Medicine	
Theory	135 Marks
Internal Evaluation	15 Marks
Oral & Practical	110 Marks
Internal Evaluation	15 Marks
Project	25 Marks
Total	300Marks

II. Special Pathology	
Theory	135 Marks
Internal Evaluation	15 Marks
Practical & Oral Exam:	135Marks
Internal Evaluation	15 Marks
Total	300 Marks

III. Otorhinolaryngology (ENT)	
Theory	90Marks
Internal Evaluation	10 Marks
Oral & Practical	90 Marks
Internal Evaluation	10 Marks
Total	200 Marks

IV. Ophthalmology	
Theory	90Marks
Internal Evaluation	10 Marks
Oral & Practical	90 Marks
Internal Evaluation	10 Marks
Total	200 Marks

c. <u>Final Year MBBS Examination</u>:

To be held at the end of the 5th year in the following subjects:

I. Medicine including Psychiatry & Dermatology Theory	
Paper-I	135 Marks
Internal Evaluation	15 Marks
Paper II	135Marks
Internal Evaluation	15 Marks
Total	300 Marks
Clinical/Practical Exam	
Clinical	240 Marks
OSCE	30 Marks
Internal Evaluation	30 Marks
Total	300Marks

II. Surgery including Orthopaedic & Anaesthesia Theory	
Paper-I	135 Marks
Internal Evaluation	15 Marks
Paper II	135 Marks
Internal Evaluation	15 Marks
Total	300 Marks
Clinical/Practical exam	
Clinical	240 Marks
OSCE	30 Marks
Internal Evaluation	30 Marks
Total:	300 Marks

III. Obstetrics and Gynaecology	
Paper I	90 Marks
Internal Evaluation	10 Marks
Paper II	90 Marks
Internal Evaluation	10 Marks
Oral& Practical	180 Marks
Internal Evaluation	20 Marks
Total	400 Marks

IV. Paediatrics	
Theory	90 Marks
Internal Evaluation	10 Marks
Oral& Practical	90 Marks
Internal Evaluation	10 Marks
Total	200 Marks

Distribution of Marks in Evaluation

University Examination	Internal Assessments
80%	20%

Examination of Subject Based MBBS Curriculum

Total 100%

Internal Assessment 20%

University Examination 80%

Internal Assessment Theory	Internal Assessment Practical	University Assessment Theory	University Assessment Practical	Total
10%	10%	40%	40%	100%

Online Assessment

Both formative assessment and internal assessment are, done at the end of modules and or clinical rotations. Summative assessment is done as per university calendar.

Which domain are assessed and how

1. Cognitive domain:
1.1 Multiple Choice Questions (MCQs)
1.2 Extended Matching Questions (EMQs)
1.3 Structured Answer Questions (SAQs)
1.4 Structured Essay questions (SEQs)
1.5 Long Answer Question 1.6 Oral Examination

2. Psychomotor domain:
2.1 Formative assessment: (Low to Medium Stake)
2.1.1 OSPE (Objective Structured Practical Examination)
2.1.2 Mini-Clinical Evaluation Exercise (Mini-CEX)
2.1.3 Surgical DOPS (Directly Observed Procedural Skills)
2.1.4 Case Based Discussion
2.2 Summative Exam: (High Stake)
2.1.1 MCQs (Few skills can be assessed)
2.1.2 Objective Structured Clinical Examination (OSCE)
2.1.3 Practical examination.
2.1.4 Direct Observation of clinical skills
2.1.5. Long case
2.1.6. Short case

3. Affective domain: (Behavior)
The following tools can assess behaviors, communication skills, Ethical practice and professionalism.
3.1 Interviews
3.2 Direct observation of communication skill and behavior
3.3 OSPE/OSCE
3.4 Portfolios 3.5 Reflections
3.6 360 degree feedback

INTERNAL ASSESSMENT THEORY

S. No.	Scoring Parameter	Marks out of 20%
01.	Attendance in lectures > 95 % = 10, 90- 94% = 9	02 %
02.	Block Exam	05 %
03.	Pre-Prof. Exam	10 %
04.	Continuous Assessment (Average Score of MCQs attempted after every learning session)	03 %

PRACTICAL AND BEHAVIORAL ASSESSMENT

S. No	Scoring Parameter	Marks out of 20%
01.	Attendance in practicals & clinical work> 95 % = 10, 90- 94% = 9	02 %
02.	Practical books/Logbooks	02 %
03.	*Continuous Assessment (Average Score of OSPEs/OSCEs attempted after every learning session)	03 %
04.	Summative Assessment (Pre Prof)	10 %
05.	Discipline/Attitude, Responsibility and Teamwork	03 %

*OSPE to be conducted at the end of each learning module and OSCE to be conducted at the end of each clinical rotation. The average of OSPEs and OSCEs will be considered as continuous assessment.

Standard 13: Students

Indus Medical College Tando Muhammad Khan is engaging their students in management, delivery as well as evaluation of their services by involving them as member in different academic committees of the Institute. Their suggestions and ideas are always respected and welcomed by the institutional management and leadership. They are always involved in curricular as well as extra -curricular activities. They are always been motivated by arranging different seminars and workshops from international facilitators.

Admission Policy

The Medical College offers a five-year Bachelor of Medicine, Bachelor of Surgery (MBBS) programme. The programme is open to all academically qualified candidates without consideration to gender, religion, race, creed, colour or domicile. Students from anywhere in Pakistan and overseas may apply as per national and provincial government policies approved by PM&DC. Indus Medical College believes in fair and merit-based admissions for the candidates from around the world. There are no quotas, reserved seats or admissions against donations. Admission policy strictly follows the guidelines of PM&DC. Merit list as issued by official national admission test conducting body/ university and endorsed by PM&DC is implemented.

Student Support Program

Student Support Program has been devised as under:

1. Students financial support policy:

Scholarship are awarded on merit student are helped Funds and finances are allocated for students support as per PM&DC policy.

2. Students counselling:

There is student counseling office to deal and fulfill students' psychological, academic and career requirements. For career counseling time by time certain seminars has been arranged at institutional level. Their teachers are available always in their corresponding departments to deal with their daily academic requirements even after the lectures to discuss and sit with their teachers.

3. Academics Records

Students' academic records are always kept confidential in their corresponding departments, the examination branch and student record office of the Institute

4. Participation in curriculum meeting

Students' medical records are also confidentially kept in the student record office. A dedicated person has been appointed for record keeping in student record office**.** Only authorized persons has access to the records if genuinely required and allowed by the registrar office in the benefit of student.

5. Extra Curricular Activities

Students are invited to attend curricular committee meetings from time to time and their suggestions given due weightage. Their perceptions, suggestions and problems regarding curriculum are being notified and discussed with the senior members of the curricular committee and medical education department in different meetings. Students from each batch are voluntarily invited to be the part of sports committee and other extra-curricular activities. They also play role as volunteer in different seminars, lectures, academic programs, Pakistan day, culture day and top ten ceremonies to guide the participants and to help the management. They are also actively involved in top ten ceremonies, Pakistan day and sports week.

They actively participate in trilingual declamation contest at different universities.

6. Research

On many occasions, they have presented research papers in different symposia.

Students can contact "student affairs" office at in case of any discrepancies.

7. Feedback

This Institute has clear policy to systemically seek, analyze and respond to student feedback about the processes and products of educational programmes through students presentation in different committees i.e., curricular committee, sports committee, extracurricular committee. They have been provided free access to preventive and therapeutic health services available at Indus Medical College Hospital. Institutional policy for health care policy for students and faculty have been approved.

Students Code of Conduct:

Policy Name: Student Code of Conduct and Disciplinary Procedures

Devised By: Department of Medical Education

Approved by: Academic Council

Date of Approval: January 5, 2014

Date of Revision: March 11, 2019

Contact Office: Office of the Registrar

- As a part of your learning, you will have privileged access to people, and to their health information.
- The Student Code of Conduct and Disciplinary Procedures has been planned with the primary objective of safeguarding exemplary behavior and conduct of students which they can achieve by exhibiting the highest degree of moral and ethical values.
- The trust that people place in doctors carries considerable responsibility, hopes and expectations regarding your behavior.
- It is imperative that you are aware of these responsibilities and expectations from the beginning of your medical training.
- Any breach of these expectations could result in serious repercussions for you, your continuing medical education and your later career.
- Indus medical college is committed to support you to uphold this Code and to assist you throughout your studies, and encourages you to know where and how to access available support services. You should think of yourself as a doctor-in-training, rather than as a student in theoretical studies.
- Though the degree of your involvement with patients, families and the wider community may initially be small, from now on you will be meeting people as part of your education as a doctor.
- As you progress through your training you will be increasingly part of the health care team.
- You represent the Medical Institute, and the medical profession, whenever you meet people in this way.
- Your behavior as part of health care system, should rationalize the trust the public places in the medical profession.
- All students will diligently apply themselves to their studies.
- Students shall attend lectures, tutorials, seminars, practical sessions, clinics and ward assignments, examinations and other scheduled courses and activities, in accordance with the 75 % attendance requirements of the affiliated University
- Each student shall be solely responsible for completing his / her scheduled examinations and attending other academic activities, as per his / her programme requirements.

- Students will respect the confidentiality of information pertaining to all clients of the IMC and IMCH including patients and their records, and will use it in no other circumstances than for authorized academic and professional purposes.
- The above mentioned principles therefore apply right from the start. We ask that you read through these principles and sign this document acknowledging your agreement to obey with them.
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Disciplinary Committee

- A disciplinary committee and students grievances committee ensures disciplinary action or provides remedies in case of students status being affected due to any reason.
- They have been informed about code of conduct at Indus Medical College as medical professional student on very first day on orientation day. Code of conduct is available for dissemination for students to be informed beforehand.
- Transfer policy is as per PM&DC guidelines.
- Student's disciplinary committee ensures that students are not participating in any political activity.
- Ramps and lifts on hospital gate way are available for handicapped students. Scholarship program and support program is available for meritorious and deserving students. Student's exchange, national and international rotation, electives & internship program have been devised.

Disciplinary Offences:

Any form of intimidation, insult, abusive language, assault, molestation or harassment of students, staff, faculty, patients or other clients, within or outside the University.

Any form of unauthorized picketing, rallies, demonstrations or organized obstructions of any student / University / University Hospital function in any manner whatsoever.

Any attempt to conceive, design or affect any plan of whatever nature whose object or consequence is to disrupt academic programmes of the University or its operations.

Malicious acts, theft, willful damage or misuse of University's or any third party's property.

Students residing or availing the hostel and its facilities shall comply with all the hostel rules and will conduct themselves in a manner that respects the rights of other resident students, faculty and staff of the University.

Unauthorized housing of persons in the hostel or other buildings at the college.

Raising funds, accepting donations or engaging in similar activities for and on behalf of the college without a prior written approval of the Institute

Smoking in prohibited in settings of the college.

Procurement, possession, use, sale or display of any weapon, including firearms or any other contraband item on campus or at any University-related event.

Procurement, possession, use, sale and consumption of banned drugs, alcohol or other contraband items on campus or at University related events.

Attendance on campus or at University-related events in an intoxicated state or under the influence of banned substances.

Any act of violence causing injury or damage to any person or property at the University.

Providing wrong information, giving false and / or fabricated evidence, deliberately concealing material facts or information to the University in any proceedings and inquiries carried out at any forum by the University.

Committing or involvement in any act of deceit, fraud, forgery with the University, students, staff or faculty.

Abuse, unauthorized or fraudulent use of University computers, network systems or computer files.

Failure to comply with or any act in violation of, contravention of or disregard for published University policies, regulations or failure to comply with the direction of University officials acting in performance of their duties.

Any form of intimidation, insult, abusive language, assault, molestation or harassment of students, staff, faculty, patients or other clients, within or outside the University.

5.1.3 Any form of unauthorized picketing, rallies, demonstrations or organized obstructions of any student / University / University Hospital function in any manner whatsoever.

5.1.4 Any attempt to conceive, design or affect any plan of whatever nature whose object or consequence is to disrupt academic programmes of the University or its operations.

5.1.5 Malicious acts, theft, willful damage or misuse of University’s or any third party’s property.

5.1.6 Students residing or availing the hostel and its facilities shall comply with all the hostel rules and will conduct themselves in a manner that respects the rights of other resident students, faculty and staff of the University.

5.1.7 Unauthorized housing of persons in the hostel or other buildings at the University.

5.1.8 Raising funds, accepting donations or engaging in similar activities for and on behalf of the University without a prior written approval of the University.

5.1.9 Smoking, eating, drinking where prohibited in settings of the University.

5.1.10 Procurement, possession, use, sale or display of any weapon, including firearms or any other contraband item on campus or at any University-related event.

5.1.11 Procurement, possession, use, sale and consumption of banned drugs, alcohol or other contraband items on campus or at University related events.

5.1.12 Attendance on campus or at University-related events in an intoxicated state or under the influence of banned substances.

5.1.13 Any act of violence causing injury or damage to any person or property at the University.

5.1.14 Providing wrong information, giving false and / or fabricated evidence, deliberately concealing material facts or information to the University in any proceedings and inquiries carried out at any forum by the University.

5.1.15 Committing or involvement in any act of deceit, fraud, forgery with the University, students, staff or faculty.

5.1.16 Abuse, unauthorized or fraudulent use of University computers, network systems or computer files.

5.1.17 Failure to comply with or any act in violation of, contravention of or disregard for published University policies, regulations or failure to comply with the direction of University officials acting in performance of their duties.

Anti Harassment Policy:

Government of Pakistan anti harassment policy document has been adapted by the academic council of IMC. It encompasses all provision for protection of women at workplace.

Medical Student Dress Code

All students should adhere to dress standards which satisfy the requirements of:

- Workplace Health and Safety
- Patient Safety
- Infection Control
- Creating a professional and positive public image

- Identification of students to patients / staff
- Comfort and security

The dress standard must be adhered to whenever a student is working in a

Professional capacity.

Standards

- Dress standards should be appropriate to the work being performed.
- Hair must be neat at all times. Long hair should be tied back when working in clinical areas.
- Jewellery and body piercing should be discreet and appropriate to patient care. It should not create an occupational hazard.
- Nails should be short, clean and neatly trimmed, particularly for patient safety and comfort.
- In areas where there is an infection control risk students should not wear nail polish or acrylic nails.
- Tattoos must be covered.

Footwear

- Footwear should be professional and fully enclosed.
- In Operating Room Suite students must wear footwear that is easily cleaned and non-slip.

Professionalism is one of the core values of Indus Medical College, Tando Muhammad Khan

The dress of medical students should reflect this, while in the premises of the college and hospital.

Elective Rotation

Elective rotation policy is described as on page No: 17

Standard 14: Faculty

Indus Medical College Tando Muhammad Khan has a leadership which is highly qualified by education, training and experience.

Faculty HR Policy

Indus Medical College Tando Muhammad Khan has a HR department who devises policies for hiring of faculty based on qualification, experience and research standards and rules set by PM&DC. This Institute is privileged by sufficient number of trained, qualified and research oriented faculty as per the needs of medical educational needs of students as per PM&DC requirements. Institute has sufficient experienced faculty members in all basic and clinical disciplines. Faculty qualification and experience is appropriately registered and updated with PM&DC.

Staff Establishment Policy

Faculty distribution is done as per qualification and experience required for each discipline as per PM&DC guidelines

Staff performance and conduct- IMC has developed clear statement regarding the responsibilities (job description) of faculty for teaching, research, patient care and code of academic conduct.

Faculty Development Program (Continuing professional education (CPE) for staff)

Department of medical education has devised a development program with objective set to train the newly hired faculty in transferring knowledge and skills effectively. Department of medical education have arranged multiple workshops in need based curriculum, effective presentation, interactive lectures, PBL, Team based learning, Research, BCQ designing and other relevant areas. Multiple workshops on need based curriculum has been arranged with each department and discipline presents its updated curricular needs as per national requirements and international guidelines.

Multiple CMEs and symposia have been conducted at our college from time to time and faculty has been encouraged to participate and avail CME hours. Faculty is encouraged to participate in medical conferences nationally and internationally and present their work. HR policy has clear guidelines of forbidding the faculty to participate unwanted political and unsocial activities.

Medical education arranges workshops for senior faculty to participate in learning activities related to innovative and evidence based medical education strategies. Every faculty member has to submit a self assessed annual report of his or her performance.

Workshop series on designing modular curriculum have been conducted recently.

Customized training for faculty and students have been done on line teaching and assessment during Covid 19 pandemic.

15. Program Evaluation and Continuous Renewal

Indus Medical College Tando Muhammad Khan evaluates its teaching program as per standards set by Quality Assurance Cell or Higher Education Commission of Pakistan. We have established a QEC Cell at Indus Medical College which remains in close contact with QEC Jamshoro. Our cell has a Director and supported by notified program teams and Assessment teams. We have attended QEC meeting at LUMHS Jamshoro. We have also collaborated in arranging QEC workshops supported by HEC Pakistan.

Indus Medical College Tando Muhammad Khan conducts a formal MBBS program evaluation twice a year and conducts it's Self Assessment Exercise and prepares a Self Assessment Report (SAR). Department of Medical Education has organized multiple workshops on need based curriculum for the Faculty to develop skills for identification of gaps in the curriculum. Gaps along with student's formative and summative assessment results and their feedbacks are discussed at curricular committee to find out the means to address them.

Resources in terms of monetary and facilities and equipment are discussed and provided by college administration as and when necessary. All stake holders' administration, faculty and students are involved in the process to assess the program as per HEC and PM&DC standards to review, monitor, map, monitor and implement curriculum needs for continuing improvements.

Implementations are documented in teaching calendar and where ever necessary.

16. Governance, Services and Resources

Indus Medical College Tando Muhammad Khan has an organogram which depicts the hierarchical system of administrative and academic governance. College is run by a board of governors registered with SECP Pakistan as Professional Associates Pakistan Limited. Board of governors has given executive powers to Dr. Iqbal Memon to run the institution as Chief Executive Officer (CEO). He is supported by an Academic Council and Curricular Committee to run the administrative and academic affairs of the college. Principal, Deans, Head of Departments, Medical Superintendents. Finance Director, HR, Controller Examination and other officials are part of organization with their well defined roles as per PM&DC rules and criteria's.

College has already gone through successfully two formal evaluation by PM&DC teams for initial recognition and fulfills all legal, financial, and infrastructure requirement criteria's as per PM&DC guidelines. It has a well equipped 500 bedded functioning hospital with facilities and equipment as per PM&DC guidelines. It has functional learning resource center with digital library and classroom, IT facilities, skill lab, laboratories and teaching infrastructure as per PM&DC criteria's.

It has a disciplinary committee to address disciplinary issues. Attached hospital has a system of welfare for patients in the form of free beds for poor patients, concessions in laboratory and radio diagnosis expenses and markedly reduced packages of treatment for deserving community in reproductive health and surgical problems. College Hospital provides free 24 hour services for victims of road traffic accidents. College has a system of endowment fund, scholarships and facility for fee payment in deserving students.

Medical Education

Indus Medical College Tando Muhammad Khan has a fully functional department of medical education headed by Prof M Akbar Nizamani, trained from UIC Chicago and long experience of self learning in medical education. DME runs a robust program of faculty development. Multiple workshops on need based curriculum, interactive lectures, Team Based learning, Lesson plan designing, Research Methods. BCQ designing, Problem Based Learning have been conducted. Recently faculty has been trained in designing integrated modular curriculum and module designing.

Indus Medical College Tando Muhammad Khan has a lawn, walking track, cafeteria and facilities for sports. All expenditure for teaching material, procedures, students and patient safety during clinical training is born by the Institution. College remains in constant contact with PM&DC to provide any information asked for including students drop out data.

College has already started a Paramedical Institute which is recognized by Sindh Board of Technical education to award two years diploma in multiple Disciplines. A nursing school registered with Pakistan Nursing council has also started functioning.

17. Research and Scholarship

Indus Medical College Tando Muhammad Khan has a Director Research/ORIC who heads research advisory committee. This committee facilitates students and faculty in conducting research, arranges workshop on research methods and proposal writing. It disseminates information for the faculty and students for available opportunities in research.

Indus Medical College Tando Muhammad Khan has a research cell. Cell works for knowledge creation, evidence based practices and scholarly productivity. It provides opportunities for integrated, multidisciplinary research and applied research. Indus Medical College Tando Muhammad Khan has a policy of hiring faculty members with interest in research and who have sufficient numbers of published articles in peer reviewed journals.

Scientific research is encouraged in basic medical sciences, community health, and child health, reproductive health, and nutrition, behavioral and psycho social areas. Faculty has hundreds of original research papers published. Department of medical education and college leadership have attended multiple conferences on medical education and have presented their work in the field of medical education like curriculum and innovative teaching methods.

Research is an integral part of curriculum as per PM&DC guidelines. College involves students to learn basic research tools like surveys for community health. We have organized workshops on research methods for faculty. College has started its own medical journal JIMC which is approved with cite factor and EUROPUB Higher Education Commission Pakistan as also approved the journal of Indus Medical College.

PROPOSED ROTATIONAL PLAN FOR ONE YEAR HOUSE JOB

GROUP (A)

a. 4 months rotation in Medicine
b. 2 months rotation in Paediatric Medicine or Pulmonology

GROUP (B)

c. 4 months rotation in General Surgery
d. 2 months rotation in Orthopedic or Surgical ICU

GROUP (C)

e. 4 months rotation in Obs and Gynae
f. 2 months rotation in Paediatric surgery or General surgery

Contribution to trained human resource for Pakistan

Three batches of 100 MBBS doctors each have graduated from the college and are serving at different areas all across the country. Multiple certified paramedic staff and technicians have graduated and serving at multiple health centers of province. College is approved by CPSP for training in different of Basic and clinical sciences.

Four successful convocations of medical graduates have been held so far.

INDUS MEDICAL COLLEGE

Tando Muhammad Khan

UNDER THE MANAGEMENT OF PROFESSIONAL ASSOCIATES (PVT .) LTD .REG. # 0074856

No. IMC/ADM/C-25/14565
Dated 20th January 2025

NOTIFICATION

The Competent Authority of Indus Medical College is pleased to constitute the **"CURRICULUM COMMITTEE"** consisting of the following members:-

S. #	NAME	DEPARTMENT	DESIGNATION
1.	Dr. Muhammad Iqbal Memon	Chief Executive Officer	CEO IMC & IMCH
2.	Prof. Dr. Azhar Iqbal	Principal / Physiology	Chairperson
3.	Prof. Dr. Umair Ali Soomro	Vice Principal/ Pathology	Member
4.	Prof. Dr. Zaheer Ahmed Memon	Anatomy	Member
5.	Prof. Dr. Hina Mawani	Anatomy	Member
6.	Prof. Dr. Syed Ali Akbar Shah	Biochemistry	Member
7.	Prof. Dr. Ghulam Rasool Bhurgri	Pharmacology	Member
8.	Prof. Dr. Gulshan Ara Jalbani	Pharmacology	Member
9.	Prof. Dr. Naseer Ahmed Shaikh	Pathology	Member
10.	Prof. Dr. Muhammad Saeed Talpur	Pathology	Member
11.	Prof. Dr. Shomail Saeed Siddiqui	Pathology	Member
12.	Prof. Dr. Inayatullah Memon	Pathology	Member
13.	Prof. Dr. ® M. Saeed Siddiqui	Community Medicine	Member
14.	Prof. Dr. Aijaz Hussain Memon	Community Medicine	Member
15.	Prof. Dr. Khalida Naz memon	Community Medicine	Member
16.	Prof. Dr. Afzal Memon	Forensic Medicine	Member
17.	Prof. Dr. Ghulam Sarwar Pirzada	Forensic Medicine	Member
18.	Prof. Dr. Bikha Ram Devrajani	Medicine	Member
19.	Prof. Dr. Rafi Ahmed Ghori	Medicine	Member
20.	Prof. Dr. Ghulam Hussain Baloch	Medicine	Member
21.	Prof. Dr. Naila Masood	Medicine	Member
22.	Prof. Dr. Mukhtiar Hussain jaffery	Medicine	Member
23.	Prof. Dr. Naveed Inayat	Pulmonology	Member

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email: info@imctmk.edu.pk
Website: www.imctmk.edu.pk

S. #	NAME	DEPARTMENT	DESIGNATION
24.	Prof. Dr. Syed Jamil Hussain	Psychiatry	Member
25.	Prof. Dr. Altaf Talpur	Surgery	Member
26.	Prof. Dr. Muhammad Hanif Memon	Surgery	Member
27.	Prof. Dr. Abdul Ghafoor Dalwani	Surgery	Member
28.	Prof. Dr. Shahnawaz Abro	Surgery	Member
29.	Prof. Dr. Abdul Rehman Shaikh	Orthopaedic Surgery	Member
30.	Prof. Dr. Saeed Ali Shah	Orthopaedic Surgery	Member
31.	Prof. Dr. Firdous Mumtaz Memon	Gynaecology & Obstetrics	Member
32.	Prof. Dr. Khairunnisa Memon	Gynaecology & Obstetrics	Member
33.	Prof. Dr. Roshan Ara Qazi	Gynaecology & Obstetrics	Member
34.	Prof. Dr. Shahla Baloch	Gynaecology & Obstetrics	Member
35.	Prof. Dr. Naushaba Rizwan	Gynaecology & Obstetrics	Member
36.	Prof. Dr. Muhammad Akbar Nizamani	Paediatrics	Member
37.	Prof. Dr. Abdullah Rizwan Siddiqui	Ophthalmology	Member
38.	Prof. Dr. Sohail Abdul Malik	ENT	Member
39.	Prof. Dr. Shafi Muhammad Shaikh	ENT	Member
40.	Prof. Dr. Jan Muhammad Shaikh	Anesthesiology	Member
41.	Prof. Dr. Nizamuddin Memon	Radiology	Member
42.	Mr. Nabeel Khan	QEC	Secretary
43.	02 Student	MBBS	Member

Dr. Durdana Asif
ADMINISTRATIVE OFFICER
Indus Medical College
Tando Muhammad Khan

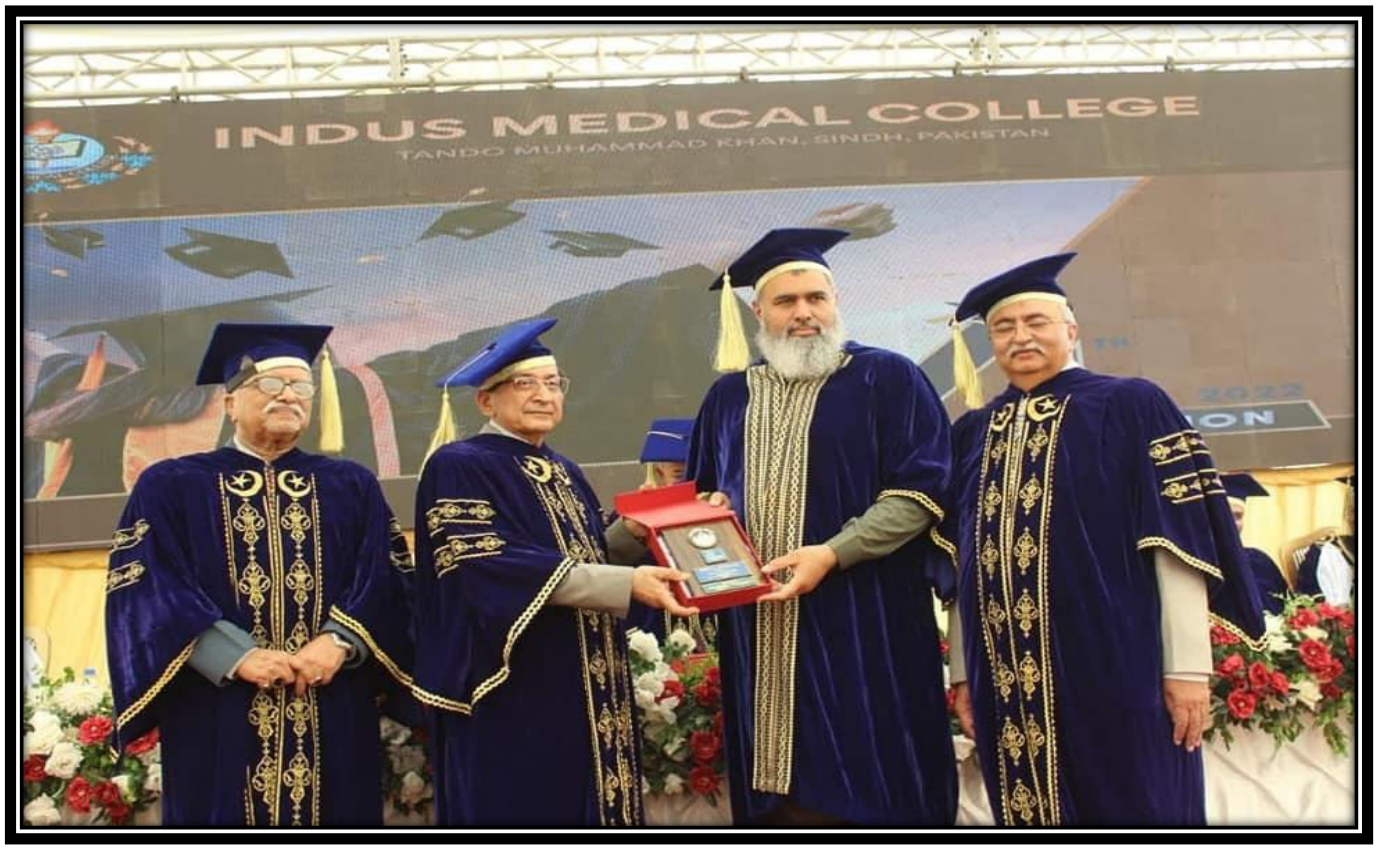
C.C to:-
1. P.S to CEO, IMC.
2. P.S to Principal, IMC.
3. 4. Director QEC, IMC.
5. All concerned.
6. Office Copy.

FIRST CONVOCATION AT INDUS MEDICAL COLLEGE

SECOND CONVOCATION AT INDUS MEDICAL COLLEGE

THIRD CONVOCATION AT INDUS MEDICAL COLLEGE

FOURTH CONVOCATION AT INDUS MEDICAL COLLEGE



FIFTH CONVOCATION AT INDUS MEDICAL COLLEGE